

FORS-COMPUTER SRL

Moldova

Has been recognized for the following credentials for HPE fiscal year 2025:

HPE Networking

Membership Membership

Business Solution Provider Business Solution Provider

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Hewlett Packard Enterprise B.V. Amstelveen, Meyrin Branch Rute du Nant d'Avril 154 (first floor) 1217 Meyrin / Geneva Switzerland www.hpe.com

Manufacturer's Authorization Form

To:

Information Technology Service Department of the Ministry of Internal Affairs Republic of Moldova, mun. Chisinau, Vasile Alecsandri str., 42

Re: Tender # MD-1747295415439, Processing and storage equipment

Dear Sirs

This is to confirm that Hewlett Packard Enterprise B.V., Amstelveen, Meyrin Branch (herein "HPEBV") is aware of the following:

FORS-COMPUTER SRL, 18, Sfatul Tsarii street, Chisinau, Cahul, Moldova (erein "HPE Partner") intends to submit a bid on the tender MD-174729541 Processing and storage equipment to Information Technology Service Department of the Ministry of Internal Affairs, Republic of Moldova, mun. Chisinau, Vasile Alecsandri str., 42 (erein the "Customer") which includes the following HPE Hybrid IT and Aruba products (herein "HPE Products"):

DL 380a Gen12 MSA 2070 Aruba 8325

; and

- If the bid is awarded to the HPE Partner, the HPE Partner will subsequently negotiate and sign a contract, subject exclusively to the terms and conditions between the Customer and HPE Partner, for the supply to the Customer of an IT solution including above mentioned HPE Products.

HPEBV acknowledges that HPE Partner is, at the date of this letter, a non-exclusive HPE authorized buying reseller, Silver status for the sale of above mentioned HPE Products. In the framework of the above-mentioned bid and its potential subsequent contract, HPE Partner is acting in its own name and on its own behalf, and has no right, power or authority to create any obligation or duty, express or implied, on behalf of HPEBV.

HPE is only responsible for providing standard warranty on the Products as per HPE standard warranty terms and conditions applicable to Moldova. The delivery of the HPE standard product warranty is provided by either the local HPE office in Moldova, or a local HPE authorized support provider.

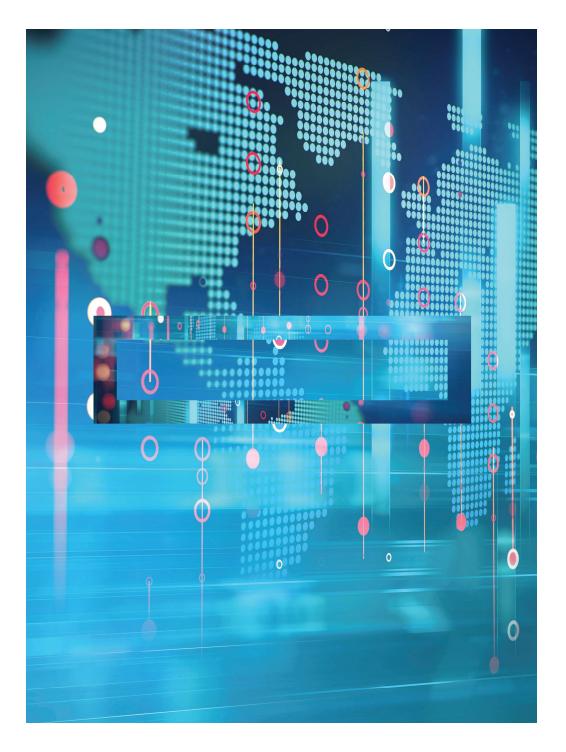
Respectfully yours,

Geneva, 1st July 2025

Hewlett Packard Enterprise B.V.

Amstelveen, Meyrin Branch

Simon Ewington Senior Vice President



Hewlett Packard Enterprise hereby awards

Roman Gutu

the title of

HPE Accredited Technical Professional Hybrid Cloud

for the successful completion of the requirements as prescribed by Certification and Learning.

Awarded on April 17, 2024

Frederic Glaser

Director, Worldwide Partner Certifications

HPE MSA Storage

Flash-ready, entry-level storage systems designed to deliver the optimal balance of simplicity, performance, and affordability where you can invest once and evolve endlessly





Grow into your first storage array

Small businesses typically have small IT requirements. Most start-ups begin with just laptops and an internet connection. If they need server or storage resources, they typically turn to a single server or the public cloud. But as a small business grows, this start-up IT setup might not be enough. They might need more of everything. This is a turning point in the life of a start-up.

As a company grows, more users, customers, applications, and data require more IT resources. When there is only one server to manage, things are easier. Add a second server and things can quickly become chaotic and inefficient and possibly a waste of money if the business is not using all the compute resources on the first server. Alternatively, virtualization—turning a single physical server into multiple virtual machines (VMs)—may be a more appropriate and cost-conscious solution. But at some point, as growth continues, a second server will be required.

Going from one server to two servers will also create new problems for data storage. Running multiple servers means it's possible to have data stored on multiple devices. This is the moment when a storage array becomes necessary, or the average company will likely experience more IT headaches than they should. A storage array combines multiple data storage drives into one system, which can then store huge amounts of data. The storage array is virtually carved up into smaller chunks of storage and presents to servers as if it were a drive attached to each server itself. But it's not a drive on the server—it's storage on a separate device accessed over a wire. That wire could be a cable directly connected between the server and the storage array or it could be that the server and the storage array are connected through a network.

The advantages of a storage array are huge no matter how it's connected. Here are three of the most common.

- 1. **Data protection and redundancy:** A storage array takes multiple drives and connects them together. When data is stored, it's spread across multiple drives. This feature is called redundant array of independent disks (RAID), and it ensures that a drive failure doesn't result in lost data.
- 2. **Scalability:** Adding capacity to a storage array is straightforward and cost efficient. When you first get the array, you will add drives based on how much data you have, plus a buffer of around 20%. When the data stored reaches that buffer, it's easy to add more capacity. Simply add new drives by plugging them into empty slots in the array and the overall storage capacity grows. Many arrays can expand to support hundreds of drives for hundreds of terabytes (TB) or petabytes (PB) of data storage.
- 3. **Virtualization support:** Storage arrays centralize data storage so each VM can access data independently and this includes the VM image itself. When you have two or more servers, you may be running multiple VMs on each server. If you move a VM from one server to another, you don't have to move the data because the new machine accesses the VM image and the data on the storage array too.

Upgrade or replace your existing storage array

A small to medium-sized business (SMB) that currently utilizes a storage array has already realized the benefits of centralized storage. However, there are times when upgrading an existing array or replacing it altogether becomes necessary. There are many different reasons why businesses need a new storage array, but the most common one is that the storage array has reached the end of its service life. If you own a storage array, at some point the manufacturer will notify you that an end-of-life (EOL) process has begun. Every manufacturer does things a little differently, but all of them have a process that includes a last-time-to-buy date (can be up to one year from the EOL announcement) and an end-of-service life date that marks the point in time when the company will no longer support the product with upgrades, bug fixes, and technical support (usually up to five years from the last-time-to-buy date).

Owners of an EOL array should start exploring options at least six months before the last-time-to-buy date. It's important to project capacity needs that take the storage array to the end of its support contract. This is the time to purchase additional drives, drive enclosures, and any other hardware that won't be available after the last-time-to-buy date. If your storage array is within one year of its end of service life or its support contract expiration, you should be looking to buy a new storage array and move the data from your current array.

HPE MSA Storage is centralized storage for today's SMB

Whether you are looking for your first storage array or upgrading to a new one, the HPE MSA Storage system is a great choice. The average SMB relies heavily on technology. However, they still have limited IT resources. Today's SMBs must do more with less and this requires systems and tools that are easy to use, capable of performing at a high level, and priced to fit within an SMB-sized budget. HPE MSA Storage is a true entry-level array that enables businesses to start small and expand capacity and performance as business needs grow.

HPE MSA Storage has been serving the storage needs of SMBs for more than 25 years. Over this time, HPE MSA Storage has primarily undergone evolutionary changes rather than revolutionary transformations. It's this incremental and thoughtful approach to change that has contributed to the success of HPE MSA with more than a half million sold since 1996. Here are the reasons why, year after year, HPE MSA Storage is a top choice in the entry-level storage array space.

The shared storage system anyone can use

HPE MSA Storage requires little technical knowledge to get started and can even be configured and deployed in a matter of minutes. Small businesses, remote offices, branch offices, or departments typically have limited resources and lack the time and expertise to learn a complicated system. HPE MSA Storage is purpose-built for simplicity, helping eliminate the need for extensive training. With the simplicity of HPE MSA Storage, you won't need manuals or extensive training to use it.

HPE MSA Storage helps administrators deploy and manage storage resources quickly and easily with:

- A unique GUI, known as the Storage Management Utility, which has step-by-step instructions and guided workflows to set up the array
- A simplified system dashboard that has at-a-glance views to monitor system alerts, performance, capacity, and required activities
- The MSA Storage Health Check tool that provides a summarized report of findings, recommended improvements, and opportunities to improve the array's availability
- A hands-free tiering engine that fully automates archive and performance tuning so the manual work of managing data to the appropriate storage tier is drastically reduced
- Customer self-repairable parts that make it easy for anyone to swap out media, controllers, and power supplies

Real performance you can see and feel

HPE MSA Storage is a top performing storage array in the entry-level segment. It consistently delivers a great experience across a large variety of businesses and their use cases. HPE MSA Storage systems are optimized to run a variety of workloads. It's capable of delivering high performance read and write data access across a broad range of applications from databases and virtualization to backup and recovery. Without a high performant storage array, applications may perform poorly and lag as the server waits for data to be written or retrieved.

HPE MSA Storage delivers high performance storage capabilities with:

- Up to 783,000 random read (RR) input/output operations per second (IOPS)
- Up to 14.1 GB/s sequential read throughput
- Real-time data tiering that places the most-used data on high performance drives and the least-used data on high-capacity drives
- Rebuild times for failed drives that are up to 25x faster than RAID 6¹
- Spare drives that are integrated and used instead of sitting idle
- All-flash systems that can be built using a wide array of high performance capacity drives

Big or small, it's a great value

HPE MSA Storage is designed to be affordable without sacrificing performance. The HPE MSA Storage design focuses on delivering consistent, high performance storage through innovation as opposed to adding higher-cost components to achieve similar performance. The result is that you can configure an HPE MSA Storage array to be one of the lowest-priced storage systems on the market or to be a high performance or high-capacity storage system at an affordable price. No matter how you configure your HPE MSA Storage, it's a great value. Without affordability designed into the platform, you would be forced to compromise on performance or spend more than necessary.

HPE MSA Storage provides affordable capacity and performance for centralized storage with:

- HPE MSA Storage array solutions starting at less than \$9000
- A dedicated ASIC for RAID rather than using higher-cost components such as memory and more CPUs to achieve similar performance
- Free access to Health Check, a tool to assess performance and configuration against a set of best practices
- Value-driven bundles including drive 6 packs and hybrid flash and all-flash solution bundles at affordable prices



¹ Based on HPE internal performance testing, 2024

Why choose the HPE MSA Storage system?

Small businesses don't usually have dedicated storage administrators like medium and large businesses do. Small businesses don't typically have complex environments that require millions of IOPS. Small businesses don't generally have large IT budgets and are typically cost-conscious. The HPE MSA Storage system is built to meet the needs of most small businesses. It is the optimal balance of simplicity, speed, and affordability.

Simple

HPE MSA Storage is a true entry-level storage array with a user experience that is designed to be smooth for everyone. The HPE MSA Storage system is designed for SMBs who only look after their storage resources part-time. HPE MSA Storage has a unique GUI, called the Storage Management Utility that doesn't require storage expertise or an instruction manual. It is driven by features like guided workflows, which take you through the HPE MSA Storage setup process step by step. After setup, at-a-glance monitoring makes system reporting easy to access. There is no need to search for important data. This makes HPE MSA Storage easy to deploy and manage for an IT generalist who is responsible for managing all of IT.

Fast

As most small businesses don't need millions of IOPS, HPE MSA Storage focuses on increasing performance for how small businesses typically use shared storage. HPE MSA Storage has high performance metrics that put it near the top of the entry-level space. HPE MSA Storage can deliver up to 783,000 IOPS and 14.1 GB/s of throughput.² Many storage arrays on the market will have fewer IOPS or slower throughput or both. Additionally, if you opt for a hybrid array with a mix of spinning disks for capacity and solid-state drives for speed, HPE MSA Storage will move data approximately every five seconds to keep the hottest data spread out on the fastest drives and the coldest data on the slowest drives. Some entry-level storage arrays do not support real-time data tiering and can only move data once per day, which can lead to slow performance if a hot application is accessing cold data.

Affordable

HPE MSA Storage is designed to fit within the average small business IT budget. Some vendors will typically use a combination of extra cache, high-end general-purpose processors, and extra memory to achieve their performance benchmarks. The problem with this approach is that it adds unnecessary extra costs. HPE MSA Storage is different because it has a custom-designed offload ASIC that provides high performance with less memory. Designing and engineering this ASIC requires a significant commitment to the entry-level storage space, but it results in structurally lower costs to manufacture. After the HPE MSA Storage system is up and running, you can use the HPE MSA Health Check tool to assess performance and configuration against a set of best practices while also checking system health and firmware levels. HPE MSA Health Check is a free tool available to all HPE MSA Storage platforms and doesn't require a licensing fee to use it.

Ready to adapt and grow when you are

You can expect HPE MSA Storage to continue to serve your data storage needs for years after your initial investment. HPE MSA Storage supports modular expansion with the ability to grow capacity easily by adding drive enclosures and media. HPE MSA Storage can scale up to 7.3 PB of storage capacity using its wide range of SFF and LFF HDD media options. Each HPE MSA Storage system comes with a default set of features every SMB uses. HPE MSA Storage also provides an upgrade path to an expanded feature set used by some SMBs. Increasing the number of snapshots and adding remote snap replication can happen anytime. Finally, when it's time to upgrade to a new HPE MSA Storage generation, data-in-place upgrades make migration easy. Just take out the drives from one HPE MSA and insert them into the new HPE MSA and it starts up right where you left off.³

³ Supported on HPE MSA Gen6 to HPE MSA Gen7 Storage transitions



² Based on HPE internal performance testing, 2024

Better together with HPE ProLiant servers

HPE MSA Storage and HPE ProLiant have been delivering better together solutions since 1996. A key to this relationship is integration testing from Hewlett Packard Enterprise. HPE engineers test a wide array of HPE ProLiant NICs and HBAs across many generations to validate interoperability between HPE ProLiant and HPE MSA Storage. Testing helps HPE deliver greater confidence to customers before purchase and a better support experience afterward. HPE's commitment to interoperability between HPE ProLiant servers and HPE MSA Storage is well documented in HPE publicly accessible Single Point of Connectivity Knowledge (SPOCK) tool available on HPE.com. The improved combination of HPE ProLiant and HPE MSA Storage also applies to customer support as HPE becomes the single support call for compute and storage, contributing to a greater overall experience with both products.



The HPE MSA Storage system technology

HPE MSA Storage has been operating on the principles of simple, fast, and affordable, through evolution, not revolution, since 1996. This well-established trend of providing iterative performance and scalability, all while expanding features that are truly useful to SMBs, has rightfully earned HPE MSA Storage a place as a go-to solution for the SMBs looking for shared, centralized storage. Current customers have come to understand that HPE MSA Storage is all about operating well on simple, fast, and affordable principles, not reinventing the platform with each generation.

The HPE MSA Storage system is built with a redundant architecture that helps eliminate single point of failure in key areas of the system. This improves reliability, application availability, and uptime. The HPE MSA Storage system supports a wide range of SFF and LFF media, including HDDs and solid-state drives (SSDs), many of which support drive encryption technology.

While each HPE MSA Storage system has its unique characteristics and use cases, these common features form the foundation.

Broad performance

HPE MSA Storage continues to achieve some of the highest performance metrics in the entry-level storage space. It begins with an unwavering commitment to research and development. Every HPE MSA Storage controller includes a custom-designed offload ASIC, which is key to its ability to support consistently high performance storage. Boost performance even further by combining the high performance of SSDs with the low cost per GB of HDDs to create a performance/capacity-optimized hybrid storage array with hands-free, automated data tiering. Or simply max out performance with an all-flash array that includes factory-integrated SSD media.

Each HPE MSA Storage model can achieve up to 2x more IOPS performance⁴ and up to 30% more GB/s of throughput performance⁵ compared to prior HPE MSA Storage generations. HPE MSA Storage also includes HPE MSA-DP+ technology, which is capable of restoring data up to 25x faster than RAID 6 in the event of a drive failure.⁶

The numerous options available for HPE MSA Storage means you can configure and operate your new HPE MSA Storage with the right balance of performance and capacity at an affordable price. Start with a budget-optimized or performance-optimized array controller system and expand capacity with each drive enclosure you add. Drive enclosures are available in two varieties: one holds 12 LFF drives and the other holds 24 SFF drives.

⁴ Based on HPE internal performance testing of random reads IOPS, 2024

⁵ Based on HPE internal performance testing of segmented sequential writes, 2024

⁶ Based on HPE internal performance testing, 2024

Automated tiering

Data tiering is the concept that the most-used data is on high performance drives while the least-used data is on high-capacity drives. Setting up a storage array to have separate high performance and high-capacity drives optimizes cost for systems with both hot and cold data. High performance drives cost more per GB (sometimes much more) while high-capacity drives cost less per GB (sometimes much less). The HPE MSA Storage system is flexible and can handle configurations with all HDDs, all SSDs, or a hybrid of both.

With hybrid storage, placing the data that consumes the most input/output (I/O) on the highest-performing drives is key. It's possible to manually place the data on the appropriate drive. For instance, an accounting system used daily might be a perfect fit for the highest-performing drives. However, not all data has a constant high-usage characteristic. Data used a lot for a couple of days but lies dormant for the rest of the month would be forced to sit on costly high performance drives while it waits for days of high usage.

HPE MSA Storage supports combining multiple drive technologies such as SSDs, high performance HDDs, and large-capacity HDDs in a single array. To help ensure data that consumes the most I/O is on the fastest drives, a fully automated tiering engine moves data to the most suitable tier. Automated tiering uses the latest version 2.0 enhancements to respond to I/O changes in near real time to provide an optimized balance between system performance, drive capacity utilization, and cost. This feature helps eliminate human decision-making, intervention, and manual work to move data.

Automated tiering is an option available on every HPE MSA Storage array. To use automated tiering, the HPE MSA Storage system must have an HPE MSA Advanced Data Services (ADS) license and more than one data storage tier, such as SSDs and HDDs. The HPE MSA 2062 and HPE MSA 2072 include the ADS license.

HPE MSA-DP+

RAID is a feature in storage systems that is used to reduce the possibility of data loss due to a drive failure. It works by writing data to more than one drive. Thus, if one drive fails, the remaining drives have the data and can rebuild the failed drive on an empty spare drive. There are multiple RAID configurations that are possible, and each requires a minimum number of drives. For example, RAID 1 requires two drives, RAID 5 requires three drives, and RAID 6 and RAID 10 require four drives.

The RAID configuration also affects how long it takes to rebuild the drive. Rebuild times are a function of the drive capacity and the average sustained write speed. Depending on the RAID configuration, rebuild times can be extremely long—sometimes measured in days—as the remaining drives all write data to a single physical drive. During the rebuild, the risk of data loss increases if another drive fails. Also, while the rebuild is happening, usually the storage array is in a degraded state as it must actively provide data storage resources while simultaneously rebuilding the failed drive.

HPE MSA-DP+ is an advanced disk group type that overcomes many of the challenges of traditional RAID. The result is a far more efficient scheme of storing and protecting data. Unlike traditional RAID configurations where spare drives sit idle, HPE MSA-DP+ spare drives are active and used. Spare capacity is distributed across multiple physical drives rather than using a single physical drive as the designated spare. When a physical drive fails, rebuild times are up to 25x faster than some traditional RAID configurations⁷ because the rebuild occurs across multiple drives (many-to-many vs. many-to-one). Traditional RAID also requires adding a minimum number of identical drives to expand capacity. With HPE MSA-DP+, you can expand capacity with just one drive that is up to twice the capacity of the others in the group.

HPE MSA-DP+ makes the entire array more cost-efficient with faster recovery, greater availability, and more performance by uniquely spreading data across disk groups and utilizing spares. It also supports easy and flexible data growth. Traditional RAID requires a minimum number of identical drives to expand capacity. With HPE MSA-DP+, you can expand capacity with just one drive that is up to twice the capacity of the others in the group.

⁷ Based on HPE internal performance testing, 2024

Choose your performance and capacity

The HPE MSA Storage system is made up of one array controller system and optional expansion drive enclosures.

Array controller systems

An array controller system is an all-in-one storage array that fits in a 2U rack space and includes dual connections that attach directly to a server (through an SAS cable) or link to a network switch (through iSCSI or Fibre Channel).

Budget-optimized HPE MSA Gen6 array controller systems

	HPE MSA 1060	HPE MSA 2060	HPE MSA 2062	HPE MSA 2060 Flash Bundle
Purpose	Low-cost entry	High capacity with a la carte customization	Cost-effective hybrid	Cost-effective high performance
Great for	Maximum affordability Small deployments	Maximum configuration flexibilityTAA requirements	Day 1 hybrid flash Optimizing performance for minimal investment	Day 1 all flashHighly demanding workloads
Usage	You expect only minimal capacity and performance requirements	You expect capacity and performance needs to change over time	You expect to serve a range of applications that require different levels of read/write intensity and data retention periods	You expect to serve mostly high performance applications, databases, and VMs
Need	You need only the minimum performance and capacity	You need to custom build a solution using the largest number of media options including SSD, HDD, and self-encrypting drives	You need the best pricing on an automated tiering HPE MSA Gen6 Storage solution	You need the best pricing on the highest-performing HPE MSA Gen6 Storage solution
Maximum IOPS (random reads)	154,000	395,000	395,000	395,000
Maximum throughput (sequential reads)	6.6 GB/s	13.1 GB/s	13.1 GB/s	13.1 GB/s
Capacity included	None	None	2x 1.92 TB SSD	12 SSDs totaling 12 TB, 23 TB or 46 TB of capacity
Maximum raw capacity	184 TB	184 TB (SFF) 240 TB (LFF)	173 TB	138 TB
Maximum expansion drive enclosures	3	9	9	9
Automated Tiering	Optional (\$)	Optional (\$)	Included	Optional (\$)

Performance-optimized HPE MSA Gen7 Storage array controller systems

	HPE MSA 2070	HPE MSA 2072	HPE MSA 2070 Flash Bundle
Purpose	High capacity with a la carte customization	Cost-effective hybrid	Cost-effective high performance
Great for	Maximum configuration flexibility TAA requirements	Day 1 hybrid-flashOptimizing performance for minimal investment	Day 1 all flash Highly demanding workloads
Usage	You expect capacity and performance needs to change over time	You expect to serve a range of applications that require different levels of read/write intensity and data retention periods	You expect to serve mostly high performance applications, databases, and VMs
Need	You need to custom build a solution using the largest number of media options including SSD, HDD, and self-encrypting drives	You need the best pricing on an automated tiering HPE MSA Gen7 Storage solution	You need the best pricing on the highest-performing HPE MSA Gen7 Storage solution
Maximum IOPS (random reads)	783,000	783,000	783,000
Maximum throughput (sequential reads)	14.1 GB/s	14.1 GB/s	14.1 GB/s
Capacity included	None	2x 1.92 TB SSD	12 SSDs totaling 23 TB or 46 TB of capacity
Maximum raw capacity	737 TB (SFF) 288 TB (LFF)	173 TB	138 TB
Maximum expansion drive enclosures	9	9	9
Automated Tiering	Optional (\$)	Included	Optional (\$)

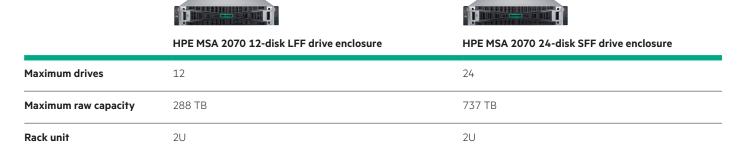
Expansion drive enclosures

When an HPE MSA Storage array controller system has reached its maximum drive capacity, adding more capacity first requires adding an expansion drive enclosure. There are two options for drive enclosures based on the drive form factor (LFF or SFF). Drive enclosures feature dual SAS connectivity for redundant configuration to the array controller system. Multiple drive enclosures can be added, up to the maximum supported by each array controller system.

Budget-optimized HPE MSA Gen6 Storage expansion drive enclosures

	HPE MSA 2060 12-disk LFF drive enclosure	HPE MSA 2060 24-disk SFF drive enclosure
Maximum drives	12	24
Maximum raw capacity	184 TB	240 TB
Rack unit	2U	2U

Performance-optimized HPE MSA Gen7 Storage expansion drive enclosures



For a full list of supported options and details for array controller systems and expansion drive enclosures, review the QuickSpecs for the HPE MSA 1060 Storage Array, HPE MSA 2060 Storage Array, or HPE MSA 2062 Storage Array. Find all the supported options and details for the HPE MSA Gen7 Storage models through the Gen7 QuickSpecs.

Note: All HPE product QuickSpecs are accessible from the <u>QuickSpecs home page</u>.

6-pack drive bundles

HPE MSA Storage provides flexibility and affordability options when it's time to upgrade capacity. HPE MSA-DP+ delivers a unique upgrade option where you can expand capacity with as little as one drive at a time. HPE offers a large variety of drives for HPE MSA Storage in quantities as small as one. However, there is another option that will likely save you money versus buying them individually. 6-pack drive bundles are available on some of the more popular form factors (SFF and LFF), media types (HDD and SSD), and sizes (GB to TB), available in standard or self-encrypting drives. Check with your HPE sales representative or channel partner for further details.

Additional features and tools

HPE MSA Storage has a large variety of standard features and capabilities. There are also additional free tools and optional add-ons that are available for purchase. Some of the most popular are as follows.

HPE MSA Health Check

HPE MSA Health Check is a cloud-based tool that provides users insight into the general health of their HPE MSA Storage system. The tool uses a powerful rules-based analytics engine, which can predict failures before they happen. It performs a full sweep of analytics and checks thousands of data points from sensors inside the HPE MSA Storage system. The analytics engine will pick up common failure signatures and check against HPE MSA Storage best practices. When completed, it will produce a simple, easy-to-digest PDF report with status and suggested courses of action to correct anything found in the scan. The tool is free of charge to HPE MSA Storage customers.

HPE MSA Advanced Data Services

The HPE MSA Advanced Data Services license is included on HPE MSA 2062 and HPE MSA 2072 array controller systems. It can also be purchased as an option on any other HPE MSA Storage array controller system. The HPE MSA Advanced Data Services license includes the following functionality:

- Automated tiering
- Snapshot expansion from 64 to 512
- Remote snap functionality that makes the HPE MSA Storage system capable of remote asynchronous replication
 from a local system to a volume on a second independent system. This second system may be colocated with the
 first system or may be located at a remote site.

HPE Storage Integration Pack for VMware vCenter

The HPE Storage Integration Pack for VMware vCenter® (formerly known as HPE OneView for VMware vCenter) is a component that enables VMware vSphere® administrators to quickly obtain context-aware information and manage their HPE MSA Storage system directly from within vCenter. By providing a clear relationship between VMs, data stores, and storage, the VMware® administrator's productivity increases, as does the ability to ensure quality of service. Roles for administrators can be defined on an individual basis, providing the ability to apply specific permissions for both view and control functions. This plug-in operates independently of the core HPE OneView product and does not require a license to use.



Warranty

HPE MSA Storage systems carry a three-year limited warranty, parts-only exchange, normal business hours, with next business day response.

- HPE MSA Enterprise SAS (10K RPM) SFF HDDs carry a three-year limited warranty, parts-only exchange, normal business hours, with next business day response.
- HPE MSA Midline SAS (7.2K RPM) LFF HDDs carry a one-year limited warranty, parts-only exchange, normal business hours, with next business day response.
- HPE MSA SSDs carry a three-year limited warranty, parts-only exchange, normal business hours, with next business
 day response. The HPE MSA SSD warranty includes unconditional replacement in case of drive failure, media wear
 out, or both.
- The HPE MSA Storage system has been designed with customer-self-repairable parts to minimize repair time and provide greater flexibility in performing defective parts replacement.

Visit HPE Storage Global Limited Warranty and Technical Support for further details.

HPE Services

No matter where you are in your transformation journey, you can count on <u>HPE Services</u> to deliver the expertise you need when, where, and how you need it. From planning to deployment, ongoing operations, and beyond, our experts can help you realize your digital ambitions.

Consulting services

No matter where you are in your journey to hybrid cloud, our <u>consulting services</u> experts can help you map out your next steps. From determining what workloads should live where, to handling governance and compliance, to managing costs, our experts can help you optimize your operations.

HPE Managed Services

<u>HPE Managed Services</u> runs your IT operations, providing services that monitor, operate, and optimize your infrastructure and applications, delivered consistently and globally to give you unified control and let you focus on innovation.

Operational support services

Optimize your entire IT environment and drive innovation with our <u>Operational support services</u>. Manage day-to-day IT operational tasks while freeing up valuable time and resources. Meet service-level targets and business objectives with features designed to drive better business outcomes.

Recommended services

HPE Tech Care Service

HPE Tech Care Service is the operational support service experience for HPE products. The service goes beyond traditional support by providing access to product-specific experts, an Al-driven digital experience, and general technical guidance to not only reduce risk but also constantly search for ways to do things better. HPE Tech Care Service delivers a customer-centric, Al-driven, and digitally-enabled customer experience to move your business forward. HPE Tech Care Service is available in three response levels. Basic, which provides 9x5 business hour availability and a two-hour response time. Essential, which provides a 15-minute response time 24x7 for most enterprise-level customers. Critical, which includes a six-hour repair commitment where available and outage management response for severity 1 incidents.

HPE Complete Care Service

<u>HPE Complete Care Service</u> is a modular, edge-to-cloud IT environment service designed to help optimize your entire IT environment and achieve agreed-upon IT outcomes and business goals through a personalized experience. HPE Complete Care Service is delivered by an assigned team of HPE Services experts, who provide:

- A complete coverage approach—edge to cloud
- An assigned HPE team
- Modular and fully personalized engagement
- Enhanced incident management experience with priority access
- Digitally enabled and Al-driven customer experience

Al-powered and digitally-enabled support experience

Achieve faster time to resolution with access to product-specific resources and expertise through a digital and data-driven customer experience. Sign in to the HPE Support Center experience, featuring streamlined self-serve case creation and management capabilities with inline knowledge recommendations. You will also find personalized task alerts and powerful troubleshooting support through an intelligent virtual agent with a seamless transition to a live support agent when needed.





Consume IT on your terms

<u>HPE GreenLake cloud</u> brings the cloud experience directly to your apps and data wherever they are—at the edge, in colocations, or in your data center. It delivers cloud services for on-premises IT infrastructure specifically tailored to your most demanding workloads. With a pay-per-use*, scalable, point-and-click self-service experience that is managed for you, HPE GreenLake accelerates digital transformation in a distributed, edge-to-cloud world.

- Get faster time to market
- Save on total cost of ownership (TCO), align costs to business
- Scale quickly, meet unpredictable demand
- Simplify IT operations across your data centers and clouds

Learn more about services and how to purchase

To learn more about HPE Services, contact your HPE sales representative or HPE Authorized Channel Partner. Contact information for a representative in your area can be found at Contact HPE.

For more information, see our HPE Services website.

Learn more at

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^{*} May be subject to minimums or reserve capacity may apply



SUBJECT: Product Environmental Information Declaration DATE OF DECLARATION: 2025, March 24

Regulatory Reference:	COMMISSION REGULATION (EU) 2019/424 of 15 March 2019 laying down ecodesign requirements for servers and data storage products pursuant to Directive 2009/125/EC of the European Parliament and of the Council and amending Commission Regulation (EU) No 617/2013
Product Type:	Computer Server
Manufacturer's Name:	Hewlett Packard Enterprise 1701 E Mossy Oaks Road Spring, TX 77389-1913 United States of America Contact: sustainability@hpe.com for questions
Product Model Number:	Product Model: HPE ProLiant Compute DL380 Gen12 RMN: TPS-I035 Web link to product QuickSpecs here
Year of Manufacture:	2025
Product Category:	Server



Number 1.1.1 and 1.1.2

Internal Power Supply efficiency and Power Factor.

Power	Internal Power Supply Efficiency at 230 VAC						
Supplies	HPE P/S part number	10% load	20% load	50% load	100% load	PF @50% Load	
HPE 1000W FS Ti Ht Plg PS Kit	P03160-101	92.34	94.84	96.24	95.43	0.9892	
HPE 1800W- 2200W FS Ti Ht Plg PS Kit	P44716-101	92.27	95.09	96.18	94.9	1.000	

Number 1.2.3 - Firmware

1.2.3 From 1 March 2021, the latest available version of the firmware shall be made available from two years after the placing on the market of the first product of a certain product model for a minimum period of eight years after the placing on the market of the last product of a certain product model, free of charge or at a fair, transparent and non-discriminatory cost. The latest available security update to the firmware shall be made available from the time a product model is placed on the market until at least eight years after the placing on the market of the last product of a certain product model, free of charge.

a) Firmware and security update availability	Specific security issues, resolved in firmware, are identified in the documentation that accompanies the release of each firmware revision. HPE product support, and firmware, are available from the HPE Support Center.
	More information on HPE Product Security and Vulnerability Alerts



Number 2 SPECIFIC ECODESIGN REQUIREMENTS ONLY FOR SERVERS

2.0- Lot 9 - SPEC SERT ® Measurement Results

2.1 - Idle state power

2.2 - Active state efficiency

SPEC SERT ® Measurement Results

Product & Configuration	Power Efficiency							
ProLiant Compute DL380 Gen12 2-4 socket server	ETSI EN 30	ETSI EN 303 470 V1.1.1 (2019-03)- Environmental Engineering (EE); Energy Efficiency measurement methodology and metrics for servers					(EE);	
System Configuration	Test System	CPU Populated	Active Eff.	Active Perf. (Perf	Max Watts @ SERT® Run	Idle Watts	Idle Calculated Limit Watts	Idle 35 C Watts
(1) Intel® Xeon® 6780E (8) 64GB Samsung M321R8GA0PB1- CCPYC RAM (2) HPE 1920GB NVMe SSD (1) HPE 1000W Hot Plug Power Supply	high-end performance	1	106.8	44.6	780.5	123.4	572.5	126.6
(1) Intel® Xeon® 6505P (8) 16GB Samsung M321R2GA3PB2- CCPPC RAM (2) HPE 1920GB NVMe SSD (1) HPE 1000W Hot Plug Power Supply	low-end performance	1	54.0	10.5	336.3	108.0	161.9	104.5
(2) Intel® Xeon® 6780E (16) 64GB Samsung M321R8GA0PB1- CCPYC RAM	high-end performance	2	111.4	87.2	1332.4	243.6	873.9	243.6



(2) HPE 1920GB NVMe SSD (2) HPE 1000W Hot Plug Power Supply								
(2) Intel® Xeon® 6505P (16) 16GB Samsung M321R2GA3PB2- CCPPC RAM (2) HPE 1920GB NVMe SSD (1) HPE 1000W Hot Plug Power Supply	low-end performance	2	58.0	20.3	563.2	187.2	267.7	187.2
	Idle must be l Active				-		l in 2.1 of regu of regulation.	ılation.

Number 3.1- for Severs

3.1. From 1 March 2020, with the exception of custom made servers, made on a one-off basis, the following product information on servers shall be provided in the instruction manuals for installers and end-users (when present with the product), and on the free-access websites of manufacturers, their authorized representatives and importers from the time a product model is placed on the market until at least eight years after the placing on the market of the last product of a certain product model:

a) product type;	Computer Server
(b) manufacturer's name, registered trade name and registered trade address at which they can be contacted;	Hewlett Packard Enterprise 1701 E Mossy Oaks Road Spring, TX 77389-1913 United States of America
(c) product model number, and if applicable the low-end performance configuration and the high-end performance configuration model numbers;	TPS-I035
(d) year of manufacture;	2025



(e) PSU efficiency at 10 % (if applicable), 20 %, 50 % and 100 % of rated output power, with the exception of direct current servers, expressed in % and rounded to the first decimal place;	See PS Efficiency Form above
(f) power factor at 50 % of the rated load level, with the exception of direct current servers, rounded to three decimal places;	See PS Efficiency Form above
(g) PSU rated power output (Watts), rounded to the nearest integer. If a product model is part of a server product family, all PSUs offered in a server product family shall be reported with the information specified in (e) and (f);	See PS Efficiency Form 1 above
(h) idle state power, expressed in Watts and rounded to the first decimal place;	See SERT Measurement Results above
(i) list of all components for additional idle power allowances, if any (additional PSU, HDDs or SSDs, additional memory, additional buffered DDR channels, additional I/O devices).	See SERT Measurement Results above
(j) maximum power, expressed in Watts and rounded to the first decimal place;	See SERT Measurement Results above
(k) declared operating condition class, as detailed in Table 6;	Declare Operating Condition Class A2 (10-35 C).
(I) idle state power (Watts) at the higher boundary temperature of the declared operating condition class;	See SERT Measurement Results above
(m) the active state efficiency and the performance in active state of the server;	See SERT Measurement Results above
(n) information on the secure data deletion functionality referred to in point 1.2.2 of this Annex, including instructions on how to use the functionality, the techniques used and the supported secure data deletion standard(s), if any;	Web Link to Secure deletion document here
(o) for blade servers, a list of recommended combinations with compatible chassis;	N/A
(p) if a product model is part of a server product family, a list of all model configurations that are represented by the model shall be supplied. If a product model is part of a server product family, the product information required for items e) to m) under point 3.1 shall be reported for the low-end and high-end performance configurations of the server product family.	See SERT Measurement Results above



Number 3.3- for servers and online data storage products

3.3. From 1 March 2020, the following product information on servers and online data storage products shall be made available from the time a product model is placed on the market until at least eight years after the placing on the market of the last product of a certain product model free of charge by manufacturers, their authorized representatives and importers to third parties dealing with maintenance, repair, reuse, recycling and upgrading of servers (including brokers, spare parts repairers, spare parts providers, recyclers and third party maintenance) upon registration by the interested third party on a website provided

3.3 (a) indicative weight range (less than 5 g, between 5 g and 25 g, above 25 g) at component level, of the following critical raw materials: (a) Cobalt in the batteries; (b) Neodymium in the HDDs	Cobalt in the batteries here Neodymium in the HDDs here
3.3 (b) instructions on the disassembly operations referred to in point 1.2.1 of this Annex, including, for each necessary operation and component: (a) the type of operation; (b) the type and number of fastening technique(s) to be unlocked; (c) the tool(s) required.	Web link to product support documents here

Revision History

Date	Version	Action	Description of change
24-Mar-2025	Version 1.1	Created	New EU Lot 9 Declaration





Annex B2 - Product environmental attributes Computers and computer monitors

The declaration may be published only when all rows and/or fields marked with * are filled-in (n.a. for not applicable). Additional information regarding each item may be found under P15.

Brand *	HPE	Logo
Company name *	Hewlett Packard Enterprise	
Contact information *	Environmental Contact Centre (ECC)	Hewlett Packard
e-mail address	sustainability@hpe.com	Enterprise
Internet site *	www.hpe.com/info/environment	
Additional information		

The company declares (based on product specification or test results based obtained from sample testing), that the product conforms to the statements given in this declaration.					
Type of product *	Server				
Commercial name *	HPE ProLiant Compute DL380a Gen12				
Model number *	DL380a Gen12				
Issue date *	25-Nov-2024				
Intended market *	Global Europe Asia, Pacific & Japan Americas Other				
Additional information					

This is an uncontrolled copy when in printed form. Please refer to the contact information for the latest version.

About Annex B2

Annex B2 reflects Product environmental attributes relevant for Computers and Computer Monitors. The following items from the ECMA-370 Main body are not shown in the template:

P4.1 – P4.3 Consumable materials

P9.1 TEC and Print speed

P10.2 - P10.3 Chemical emissions from printing products

P11.1 - P11.3 Consumable materials for printing products

Model number *	DL380a Gen12	Logo	
Issue date *	25-Nov-2024		Hewlett Packard Enterprise

Product e	environmental attributes - Legal requirements	equirer	nent met
Item		Yes	No n.a.
P1	Hazardous substances and preparations		
P1.1*	Products do comply with current European RoHS Directive. (See legal reference and NOTE B1)	\boxtimes	
P1.2*	Products do not contain Asbestos (see legal reference).	\boxtimes	
	Comment: Legal reference has no maximum concentration value.		
P1.3*	Products do not contain Ozone Depleting Substances: Chlorofluorocarbons (CFC), hydrobromofluorocarbons (HBFC), hydrochlorofluorcarbons (HCFC), Halons, carbontetrachloride, 1,1,1-	\boxtimes	
	trichloroethane, methyl bromide (see legal reference). Comment: Legal reference has no maximum		
	concentration values.		
P1.4*	Products do not contain more than; 0,005% polychlorinated biphenyl (PCB), 0,005% polychlorinated	\boxtimes	
	terphenyl (PCT) in preparations (see legal reference).		
P1.5*	Products do not contain more than 0,1% short chain chloroparaffins (SCCP) with 10-13 carbon atoms in the	\boxtimes	
	chain containing at least 48% per mass of chlorine in the SCCP (see legal reference).		
P1.6*	Parts with direct and prolonged skin contact do not release nickel in concentrations above 0,5 $\mu g/cm^2/week$		
	(see legal reference). Comment: Max limit in legal reference when tested according to EN1811:2011-5.		
P1.7*	REACH Article 33 information about substances in articles is available at (add URL or mail contact):		$\overline{}$
1 1.7	www.hpe.com/info/reach		
P2	Batteries		
P2.1*	If the product contains a battery or an accumulator, the battery/accumulator is labeled with the disposal		
	symbol. Information on proper disposal is provided in user manual. (See legal reference)		
P2.2*	Batteries or accumulators do not contain more than 0,0005% of mercury or 0,002% of cadmium. (See legal	\boxtimes	
	reference)		
P2.3*	Batteries and accumulators are readily removable. (See legal reference)	\boxtimes	
P2.4*	Documentation includes the number of cycles the (secondary) battery can withstand. (See legal reference)	\boxtimes	
P2.5*	When internal batteries of a notebook computer cannot be "accessed and replaced by a nonprofessional		
	user", the related text is present and legible on the external packaging (see legal reference)		
P3	Conformity verification & Eco design (ErP)		
P3.1*	The product is CE-marked to show conformance with applicable legal requirements (see legal reference). The Declaration of Conformity can be requested at (add link or e-mail address):		\square
	https://h41388.www4.hpe.com/regulations/uk/en/regulations.html		
P3.2*	The product complies with the applicable Eco design requirements for energy-related products,	\boxtimes	\neg
1 3.2	(see legal reference).		
	Required information is; given in item P15 or added to this document,	\boxtimes	
	available at (add URL): Erp Lot9 Servers	_	
P5	Product packaging		
P5.1*	Packaging and packaging components do not contain more than 0,01% lead, mercury, cadmium and	\boxtimes	
	hexavalent chromium by weight of these together.		
P5.2*	The packaging materials are marked with abbreviations and numbers indicating the nature of the material(s)	\boxtimes	
DE 2*	used (see legal reference). The product packaging material is free from ozone depleting substances as specified in the Montreal		
P5.3*	Protocol (see legal reference).		\sqcup \sqcup
	Comment: Legal reference has no maximum concentration values.		
P6	Treatment information		
P6.1*	Information for recyclers/treatment facilities is available (see legal reference).	\boxtimes	

NOTE B1 Restriction applies to the homogeneous material, unless other specified and expressed in weight %. Stating "Yes" means that the product is compliant with the mandatory requirements.

Model number *	DL380a Gen12	Logo	
Issue date *	25-Nov-2024		Hewlett Packard Enterprise

Product	environmental attributes - Market requirements (See General NOTE GN below)			
_	- Environmental conscious design	Require		
Item P7	*=mandatory to fill in. Additional information regarding each item may be found under P14.	Yes	No	n.a.
P/	Design Disassembly, recycling			
P7.1*	Parts that have to be treated separately are easily separable	\square	П	П
P7.2*	Plastic materials in covers/housing have no surface coating.		Ħ	
P7.3*	Plastic parts > 100 g consist of one material or of easily separable materials.	X		
P7.4*	Plastic parts > 25 g have material codes according to ISO 11469 referring ISO 1043-4.			
P7.5	Plastic parts are free from metal inlays or have inlays that can be removed with commonly available tools.	\boxtimes		
P7.6*	Labels are easily separable. (This requirement does not apply to safety/regulatory labels).	\boxtimes		
	Product lifetime			
P7.7*	Upgrading can be done e.g. with processor, memory, cards or drives	\boxtimes		
P7.8*	Upgrading can be done using commonly available tools	\boxtimes		
P7.9	Spare parts are available after end of production for: 5 years			
P7.10	Service is available after end of production for: 5 years			
	Material and substance requirements			
P7.11*	Product cover/housing material type (e.g. plastics, metal, aluminum):			
P7.12	Material type: SGCC Material type: ABS+PC Material type: PC Insulation materials of external electrical cables are PVC free.			
				Н-
P7.13	Insulation materials of internal electrical cables are PVC free.		Щ.	<u> Н</u>
P7.14	External plastic casing/cover parts > 25 g contain no more than 0,1% weight (1000 ppm) bromine and 0,1% weight (1000 ppm) chlorine attributable to brominated flame retardants, chlorinated flame retardants, and polyvinyl chloride or 0,3% weight (3000 ppm) bromine and 0,3% weight (3000 ppm) chlorine in parts containing more than 25% post-consumer recycled content.			
P7.15	Printed circuit boards, PCBs (without components) are low halogen: all PCBs > 25 g are low			
	halogen as defined in IEC 61249-2-21. (See ⁵ NOTE B2)			
P7.16	Flame retarded plastic parts > 25 g in covers / housings are marked according ISO 1043-4: Marking: <i>FR(40)</i>			
P7.17	Alt. 1: Chemical specifications of flame retardants in printed circuit boards > 25 g (without components):			
	TBBPA (additive), TBBPA (reactive) \(\subseteq \text{(See NOTE B3), Other; chemical name: } , CAS #:			\bowtie
	<u>Alt. 2:</u> Chemical specifications of flame retardants in printed circuit boards (without components) > 25 g according ISO 1043-4: $FR(40)$			
P7.18	<u>Alt. 1:</u> Flame retarded plastic parts > 25 g contain the following flame retardant substances/preparations in concentrations above 0.1%:			
	1. Chemical name: , CAS #: (See NOTE B4)		Ш	\boxtimes
	2. Chemical name: , CAS #: " 3. Chemical name: , CAS #: "			
	Alt. 2: Chemical specifications of flame retardants in plastic parts > 25 g according ISO 1043-4: <i>FR(40)</i>	\boxtimes		
P7.19	In plastic parts > 25 g, flame retardant substances/preparations above 0,1% are used which have been assigned the following Risk phrases; and Hazard statements:			
	The source(s) for these classifications is/are found at (add URL(s)): , (See NOTE B5)			

GENERAL NOTE Standard references should direct to the latest version of a standard. If an older version of a standard is used, section P15 shall be used for explanation.

NOTE B2 IEC 61249-2-21 defines maximum limits of 900 ppm for each of the substances chlorine and bromine and a maximum limit of 1500ppm of these substances combined. The standard does not address fluorine, iodine and astatine which are included in the group of halogens.

NOTE B3 and B4 A Guidance document on Chemical substances is available; see https://ecma-international.org/publications-and-standards/ecma-370/.

NOTE B5 If a certain substance has been assigned a certain risk phrases / hazard statement in the referenced source, this does not necessarily mean the substance has been tested for all of the hazards referred to by a certain customer.

Model number *	DL380a Gen12	Logo	
Issue date *	25-Nov-2024		Hewlett Packard Enterprise

Product	environmental att	tributes - Market re	equirements (conti	inued)		Requi	reme	nt met
Item						Yes	No	n.a.
	Material and subs	tance requirements	(continued)					
P7.20*	Postconsumer recy	cled plastic material c	ontent is used in the p	product (See NOTE B6)) :			
	If YES; at least one of the two alternatives below shall be answered; a) Of total plastic parts' weight > 25 g, the postconsumer recycled plastic material content (calculated percentage of total plastic by weight) is %. or							
D7.04*		recycled material is	g.	IOTE DZV				
P7.21*	Biobased plastic m	aterial content is used	I in the product (See N	IOTE B7):			\boxtimes	
	 a) Of total plastic of total plastic or 	parts' weight > 25 g).	ered; material content (calcu	ılated as a percentage			
P7.22*	Light sources are fr	ree from mercury, i.e.	less than 0,1 mg/lamp			\boxtimes		
D= 00+		specify: Number of lan		num mercury content po				_
P7.23*	•	an integral display, the	e total mercury conten	t in the integrated displ	ay: mg		Ш	
P8	Batteries		L:0-00					
P8.1*	•	omposition: LiMnO2;	LICOUZ					
P9		ion (See NOTE B8)						
P9.1		following power level	s or energy consumpt	ons are reported:				
Energy mo		Power level at 100 V AC	Power level at 115 V AC	Power level at 230 V AC	Reference/Standard t modes and test meth		IY	
EPS No-load (External power supply / charger plugged in the wall outlet but disconnected from the product.)								
PTEC * Typical En	ergy Consumption	275 W	273 W	280 W				
ETEC * Annual Energy Consumption 100.375 kWh/year 99.645 kWh/year 102.200 kWh/year								
External P	External Power Supply Efficiency Level (International Efficiency Marking Protocol) *:							
Display res	Display resolution *: megapixels							
Default time to enter energy save mode: minutes								
P9.2*	Information about t	he energy save function	on is provided with the	product.	<u>'</u>			
P9.3	Energy efficiency c	lass (monitors only):						\boxtimes

NOTE B6 Applies to a product containing plastic parts whose combined weight exceeds 100 g with the exception of printed circuit boards, cables, connectors and electronic components and bio-based plastic material.

NOTE B7 The following is to be excluded from the calculation of percentage: printed circuit boards, labels, cables, connectors and electronic components and postconsumer recycled plastic

NOTE B8 A Guidance document on Energy Efficiency is available;

see https://ecma-international.org/publications-and-standards/standards/ecma-370/.

Model number *	DL380a Gen12	Logo	
Issue date *	25-Nov-2024		Hewlett Packard Enterprise

Product	environmental	attributes - Market requirements (contin	ued)	Require	ment	met
Item				Yes	No	n.a.
P10	Emissions					
	Noise emission	n – Declared according to ISO 9296 (See NOTE	B9)			
P10.1	Mode	Mode description	Statistical upper limit A-weighted sound por $L_{WA,c}$ (B)	wer level,		
	Idle	* One or more steady-state conditions in	* 7.1 <i>(B)</i>			
		which the equipment being tested is			_	_
		energized but is not operating.				
	Operation	* Condition on which the equipment being tested is performing its intended function(s).	* 9.3 <i>(B)</i>			
	Other mode					
	Measured accor	rding to: ISO 7779 ECMA-74 Other (only if not covered by	/ ECMA-74)			
	Electromagneti		,			
P10.4	Computer displa	ay meets the requirement for low frequency elect	romagnetic fields of the following voluntary		П	
	program(s):					
P12		r computing products				
P12.1*	The display mee	ets the ergonomic requirements of ISO 9241-307	for visual display technologies.			X
P12.2*	The physical inp	out device meets the requirements of ISO 9995 a	ind ISO 9241-410.			X
P13	Packaging and	documentation				
P13.1*			ight (kg): 5.148kg			
	Product packagi	ing material type(s): Extruded PE Cushion we	ight (kg): 1.475kg ght (kg): 0.017kg			
P13.2*		primary packaging is free from PVC.	<u> </u>	\boxtimes		
P13.3*	For product prim	nary corrugated fiberboard packaging, specify the ered fiber content: 30%	e contained percentage of minimum post-			
P13.4*	Specify media for	or user and product documentation (tick box): Paper , Other				
P13.5		mplete this item if paper documentation used) of documentation on paper media is chlorine-free pecify:): :			
	Elemental chlori	ne-free				
	Totally chlorine-					
	Processed chlor					
P14	Voluntary prog	rams				
P14.1		ets the requirements of the following voluntary p	rogram(s):			
		s of this product may comply with energ				
		products that are Energy Start certified <u>Energy Star Website</u>	, please go to the following link.			
	ENERGY STAR	® Criteria version: 4.0 Da	ate: Product category: Server			
	Eco-label:		ate: Product category:			
	Eco-label:		ate: Product category:			
P15		rmation (See NOTE B10)				
		claration covers the product base model only. Traphic cards with fans etc, these can change				xtra
P9	Energy consun	nption of computer products; description of to configurations can be determined using the		consump	tion fo	r
		npe.com/us/en/integrated-systems/rack-		or		

NOTE B9 A Guidance document on Acoustic Noise is available;

 $see \ \underline{https://ecma-international.org/publications-and-standards/standards/ecma-370/}.$

NOTE B10 Additional lines may be inserted to declare further items, by positioning the cursor at the far right of the row and hitting the <Enter> key.

Legal references Europe Annex B2

Reference	Declaration item
Directive 2011/65/EU (RoHS Directive)* * Specific exemptions apply for certain products and applications.	P1.1, P3.1
Regulation (EC) 1907/2006 (REACH Regulation), annex XVII	P1.2, P1.4, P1.6, P1.7
Regulation (EC) 2037/2000, 2038/2000, 2039/2000 (Marketing and use of Ozone layer depleting substances)	P1.3, P5.3
Norwegian regulation relating to restrictions on the use of certain dangerous chemicals 20.12.2002	P1.5
Directive 2006/66/EC (Battery and accumulators Directive), as amended.* * These provisions shall not apply where, for safety, performance, medical or data integrity reasons, continuity of power supply is necessary and requires a permanent connection between the appliance and the battery or accumulator.	P2.1, P2.2, P2,3, P8.1
Directive 2014/35/EU (Low Voltage Directive)	P3.1
Directive 2014/30/EU (EMC Directive)	P3.1
Directive 2014/53/EU (RE Directive)	P3.1
Regulation (EC) 801/2013 amending Regulation (EC) No 1275/2008 with regard to ecodesign requirements for standby, off mode electric power consumption of electrical and electronic household and office equipment, and amending Regulation (EC) No 642/2009 with regard to ecodesign requirements for televisions	P3.1, P3.2
Commission Regulation (EC) No 278/2009 of 6 April 2009 implementing Directive 2005/32/EC of the European Parliament and of the Council with regard to ecodesign requirements for no-load condition electric power demand and average active efficiency of external power supplies	P3.1, P3.2, P9.1
COMMISSION REGULATION (EU) No 617/2013 of 26 June 2013 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for computers and computer servers	P2.4, P2.5, P3.1, P3.2, P7.23, P9.1
Regulation (EC) No 1272/2008 (CLP Regulation)	P7.19
Directive 2004/12/EC (Packaging Directive)	P5.1
Decision 97/129/EC (Secondary packaging legislation)	P5.2
Directive 2012/19/EU (WEEE directive)	P6.1
Implementing Regulation (EU) 2019/290 establishing the format for registration and reporting of producers of electrical and electronic equipment to the register.	
Commission Implementing Regulation 2017/699 establishing a common methodology for the calculation of the weight of electrical and electronic equipment (EEE) placed on the national market in each Member State and a common methodology for the calculation of the quantity of waste electrical and electronic equipment (WEEE) generated by weight in each Member State.	



Product End-of-Life Disassembly Instructions

Product Category: Servers

Marketing Name / Model [List multiple models if applicable.]

HPE ProLiant Compute DL380a Gen12

Purpose: The document is intended for use by end-of-life recyclers or treatment facilities. It provides the basic instructions for the disassembly of HPE products to remove components and materials requiring selective treatment, as defined by Directive 2012/19/EU of the European Parliament and of the Council on Waste Electrical and Electronic Equipment (WEEE).

1.0 Items Requiring Selective Treatment

- 1.1 Items listed below are classified as requiring selective treatment.
- 1.2 Enter the quantity of items contained within the product which require selective treatment in the right column, as applicable.

1.3 Component quantities vary by product configuration

Item Description	Notes	Quantity of items included in product
Printed Circuit Boards (PCB) or Printed Circuit Assemblies (PCA)	With a surface greater than 10 sq cm	Up to 12
Batteries	All types including standard alkaline and lithium coin or button style batteries	2
Mercury-containing components	For example, mercury in lamps, display backlights, scanner lamps, switches, batteries	0
Liquid Crystal Displays (LCD) with a surface greater than 100 sq cm	Includes background illuminated displays with gas discharge lamps	0
Cathode Ray Tubes (CRT)		0
Capacitors / condensers (Containing PCB/PCT)		0
Electrolytic Capacitors / Condensers measuring greater than 2.5 cm in diameter or height	Quantity varies by product configuration and power supply model selected	Up to 72
External electrical cables and cords	Quantity depends on the number of power supplies, Networking devices, and I/O devices	Up to 8
Gas Discharge Lamps		0
Plastics containing Brominated Flame Retardants		0
Components and parts containing toner and ink, including liquids, semi-liquids (gel/paste) and toner	Include the cartridges, print heads, tubes, vent chambers, and service stations.	0
Components and waste containing asbestos		0

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Item Description	Notes	Quantity of items included in product
Components, parts and materials containing refractory ceramic fibers		0
Components, parts and materials containing radioactive substances		0

2.0 Tools Required

List the type and size of the tools that would typically be used to disassemble the product to a point where components and materials requiring selective treatment can be removed.

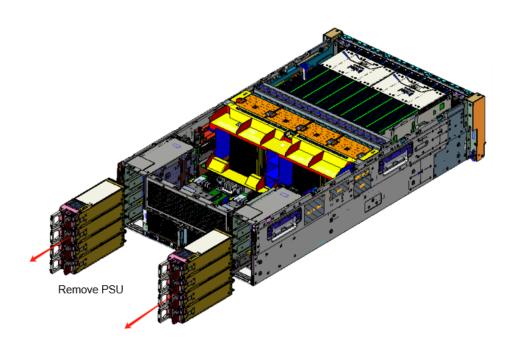
Tool Description	Tool Size (if applicable)
Screwdriver	T10, T15
Philips Screwdriver	#0, #1, #2
Hexagon socket	M7 M8
3 0 Product Disassembly Process	

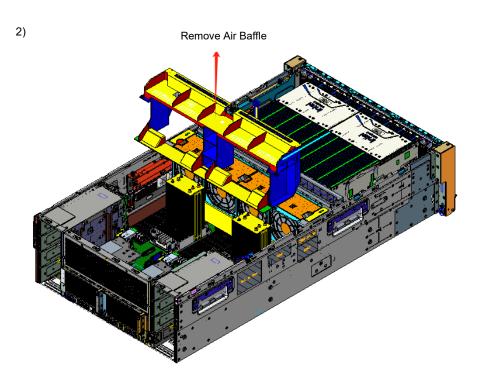
3.0 Product Disassembly Process

- 3.1 List the basic steps that should typically be followed to remove components and materials requiring selective treatment:
- 1. Disassemble the server
 - 1) Remove PSU
 - 2) Remove Air Baffle
 - 3) Remove Fan
 - 4) Remove Fan cage
 - 5) Remove Bottom Fan connector cage
 - 6) Remove GPU Tray
 - 7) Remove MEGACELL
 - 8) Remove WD cage and HDD cage
 - 9) Remove EAR Module
 - 10) Remove Cable holder bracket
 - 11) Remove rear dummy metal bracket
 - 12) Remove Side band board module
 - 13) Remove PCI Cage
 - 14) Remove PDB module
 - 15) Remove Switch Cable
 - 16) Remove DC-SCM and OCP card X2
 - 17) Remove MB and MB tray
- 2. Capacitors>2.5 cm Remove the PSU from the system. With screw driver, remove the screws securing the top cover, locate the capacitors and use a medium flat head screwdriver to remove them and dispose of properly.
- 3. System Board Battery Locate the battery on the system board. Use fingers to remove the battery and dispose of properly.
- 4. 3.2 Optional Graphic. If the disassembly process is complex, insert a graphic illustration below to identify the items contained in the product that require selective treatment (with descriptions and arrows identifying locations).

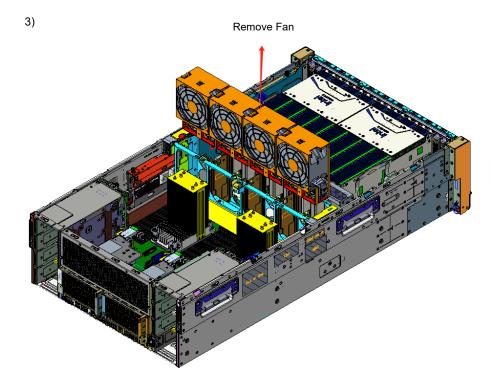
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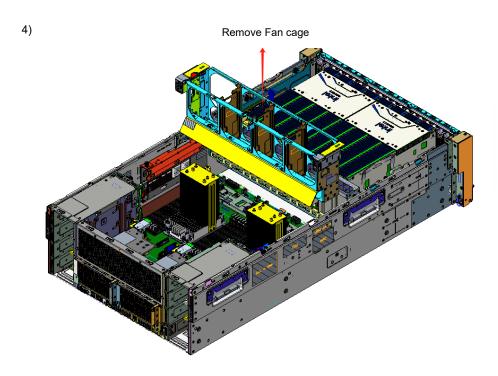
Attachment 1 - Disassemble the server





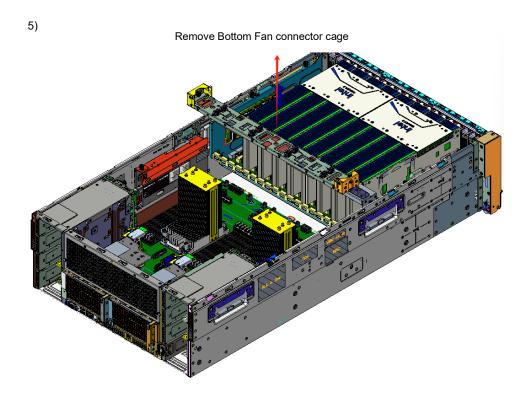
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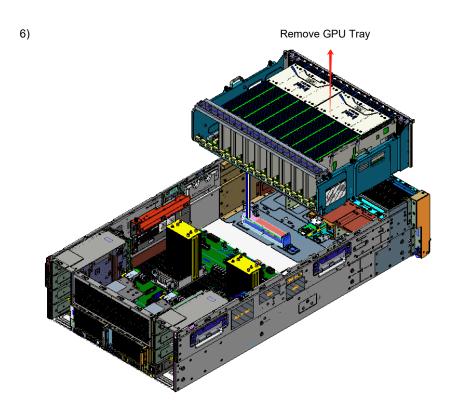




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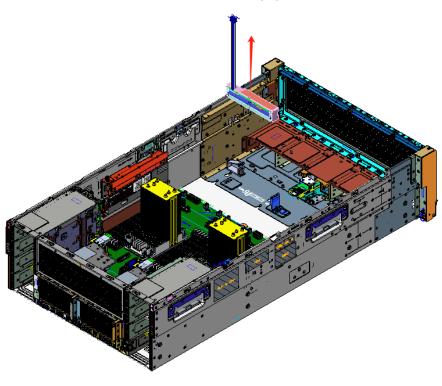
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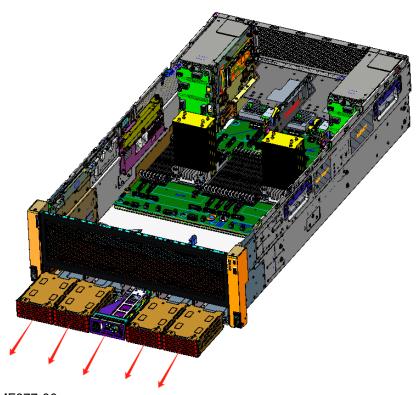


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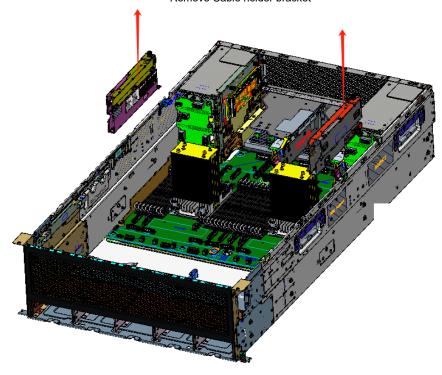


8) Remove WD cage and HDD cage

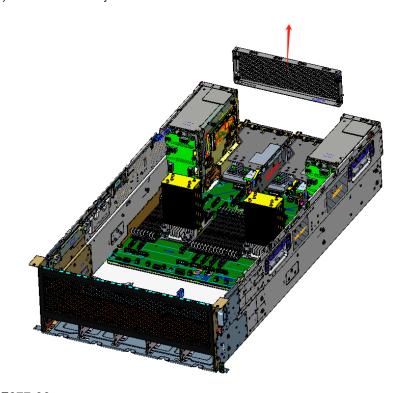


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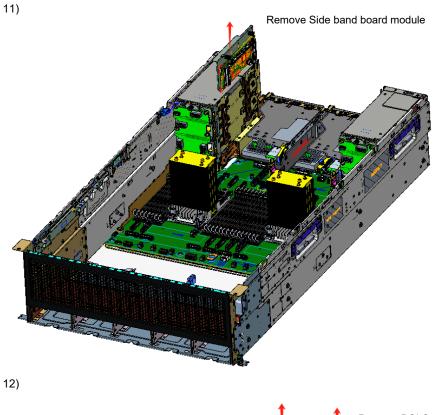


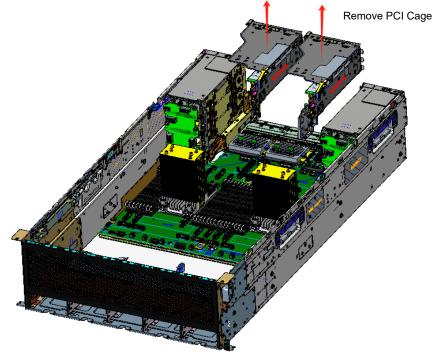
10) Remove rear dummy metal bracket



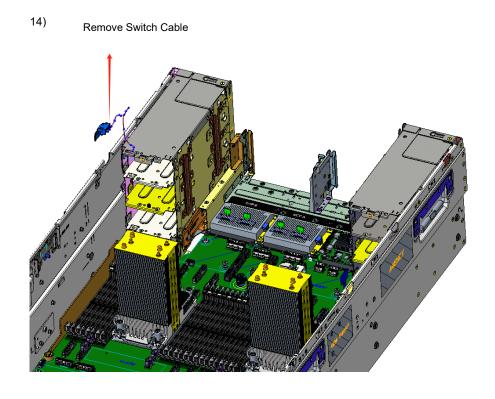
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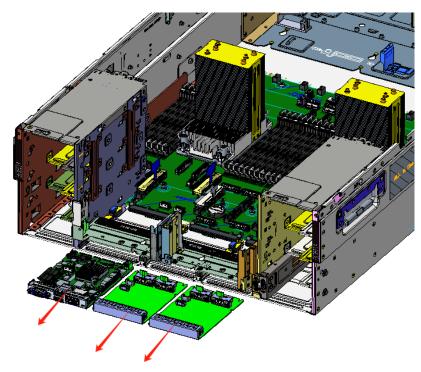




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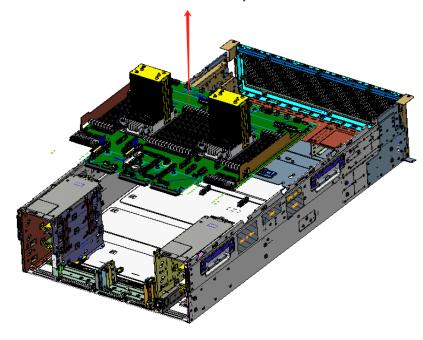
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Remove DC-SCM and OCP card X2

16)

Remove MB and MB tray



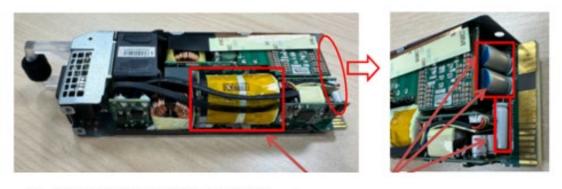
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Attachment 2 - Super Cap Location in PSU

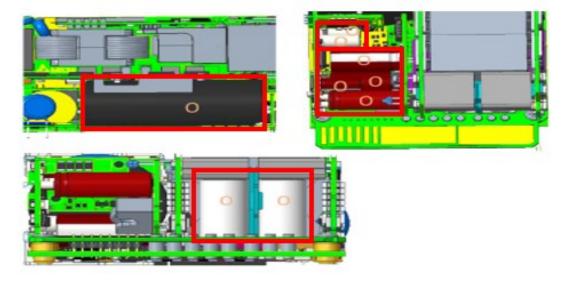
a. Model: P67247-101 (1pcs)



b. Model: 67247-601 (4pcs)

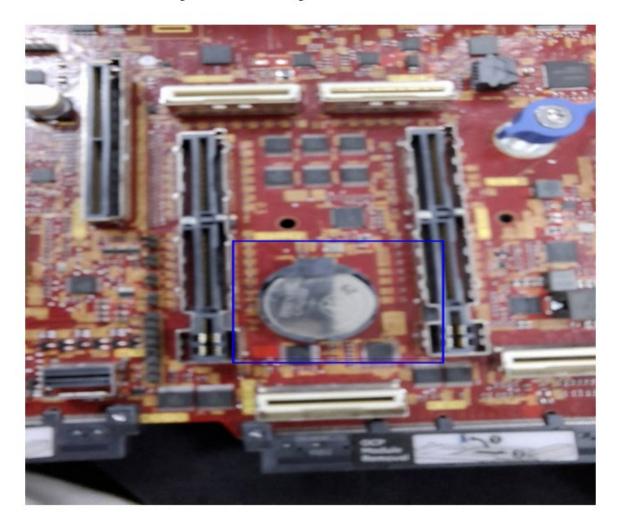


c. Model: P67255-101 & P67251-101 (9pcs)



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Attachment 3 - System Battery Location



QuickSpecs

Overview

Shape the Future of QuickSpecs - Your Input Matters

NVIDIA® Accelerators for HPE

Hewlett Packard Enterprise supports select NVIDIA GPUs and accelerators for Apollo, Alletra, ProLiant Rack and Tower, Synergy, Compute Scale-up Server, Cray, Superdome, Superdome Flex, and Edgeline systems to address HPC, AI, virtualization, edge computing, and graphics rendering and visualization.

Operating Systems and Virtualization Software Support for ProLiant Servers

See **HPE Servers Support & Certification Matrices**

- Microsoft Windows Server
- VMware ESXi
- VMware Compatibility Guide
- Red Hat Enterprise Linux (RHEL)
- SUSE Linux Enterprise Server (SLES)
- Canonical Ubuntu
- Oracle Linux and Oracle VM
- Citrix

Enterprise customers with a current vGPU software license (GRID vPC, GRID vApps or Quadro vDWS), can log into the enterprise software download **NVIDIA Drivers.**

What's New

NVIDIA RTX PRO 6000 Blackwell Server Edition 96GB PCIe Accelerator for HPE

Models

NVIDIA Ampere 2-way 2-slot Bridge for HPE	R6V66A
NVIDIA A10 24GB PCIe Non-CEC Accelerator for HPE	R9W59C
NVIDIA A2 16GB PCIe Non-CEC Accelerator for HPE	R9H23C
NVIDIA A16 64GB PCIe Non-CEC Accelerator for HPE	R8T26C
NVIDIA L4 24GB PCIe Accelerator for HPE	SOK89C
NVIDIA L40 48GB PCIe Accelerator for HPE	SOK90C
NVIDIA L40S 48GB PCIe Accelerator	S2L70A
NVIDIA L40S 48GB PCIe Accelerator	S2L70C
NVIDIA H100 NVL 94GB PCIe Accelerator for HPE	S2D86C
NVIDIA H100 NVL 94GB PCIe Accelerator for HPE	S2D86A
NVIDIA RTX 4000 Ada Graphics Accelerator for HPE	S3T54C
NVIDIA L20 48GB PCIe GPU Accelerator for HPE	S4A92C
NVIDIA H200 NVL 141GB PCIe Accelerator for HPE	S3U30C
NVIDIA 2-way NVLink Bridge for H200 NVL	S4A90C
NVIDIA 4-way NVLink Bridge for H200 NVL	S4A91C
ANADIA DEVEDDO COCO DE LA USA DE ESTA CACADADA LA CACADADA	

NVIDIA RTX PRO 6000 Blackwell Server Edition 96GB PCle Accelerator for HPE

Notes:

- Please see the HPE ProLiant Server QuickSpecs for configuration rules and including enablement kits.
- RTX PRO 6000 HPE shipments starting August 2025



Overview

XXXXXX is SKU designation formed by a common 6-digit part number with the last character that identifies a SKU that is available across multiple server family lines. Refer to the table below to find the SKU suffix to order by server product line. In some cases, Specialized Compute will leverage the -C SKU and Compute will leverage the -A SKU.

-C	-A	-K21
COMPUTE	SPECIALIZED COMPUTE	STORAGE
HPE ProLiant Servers DL20/DL160/DL180 ML30/ML110/ML350 DL325/DL345/DL365/DL385 DL360/DL380/ DL380a/DL560/DL580 DX360/DX380 DX170r/DX190r/DX200/ DX560/DX4200 MicroServer HPE ProLiant for Microsoft Azure Stack HPE Synergy 480/660 Systems HPE Edgeline Systems and Servers HPE Integrity Superdome/Superdome Flex HPE Compute Scale-up Server	HPE Cray Supercomputing HPE Apollo 35/40/70 Systems HPE Apollo 2000/6500 Servers HPE XL170r/XL190rGen10 Server for BlueData Software HPE Converged System 300/500 HPE Integrity BL860c i6/BL870c i6/BL890c i6 Server Blades HPE Integrity MC990 X Server HPE Integrity rx2800 i6 Server	HPE Alletra 4110/4120/4140 Storage Server HPE Apollo 4200 Gen9/Gen10 Servers HPE Apollo 4200 Gen10 LFF Server for BlueData Software HPE Apollo 4510 Gen10 System HPE D3000/D6020/D8000 Disk Enclosures HPE SimpliVity 2600 HPE SimpliVity 325/380 Gen10

Notes: Disclaimer This may not be a complete listing of applicable servers

XXXXXX-X21 is SKU designation formed by a common six digit part number and a -X21 suffix that identifies a SKU that is available across multiple server family lines. Refer to the table below to find the SKU suffix that applies to the specific server product line this option can be ordered with.

-B21	-H21	-K21
COMPUTE Server Line	SPECIALIZED COMPUTE Server Line	STORAGE Line
HPE Cloudline CL2100/CL2200/CL2800/CL3100/CL4 100/CL5200/CL5800 Servers HPE Composable Cloud for ProLiant DL HPE ProLiant BL460c/BL660c Servers HPE ProLiant DL20/DL160/DL180 Servers HPE ProLiant DL325/DL360/DL380/DL385/DL560/ DL580 Servers HPE ProLiant DX360/DX380 Servers HPE ProLiant MicroServer HPE ProLiant MicroServer HPE ProLiant ML30/ML110/ML350 Servers HPE Synergy 480/660 Systems HPE ProLiant DX170r/DX190r, DX2000 Servers HPE ProLiant DX560 Gen10 server HPE ProLiant DX4200 Gen10 server	HPE Apollo 35/40/70 Systems HPE Apollo 2000/6000 Servers HPE XL170r/XL190r/XL270d (Apollo 6500) Gen10 Server for BlueData Software HPE Converged System 300/500/700/750 HPE Edgeline Systems and Servers HPE Integrity BL860c i6/BL870c i6/BL890c i6 Server Blades HPE Integrity MC990 X Server HPE Integrity rx2800 i6 Server HPE Integrity Superdome HPE SGI 8600 System HPE Solutions for SAP HANA (TDI)	HPE Apollo 4200 Gen9/Gen10 Servers HPE Apollo 4200 Gen10 LFF Server for BlueData Software HPE Apollo 4510 Gen10 System HPE D2220sb/D2500sb Storage Blade HPE D3000/D6020/D8000 Disk Enclosures HPE Scalable Object Storage with Scality RING HPE SimpliVity 2600 HPE SimpliVity 325/380 Gen10 HPE Storage File Controllers HPE StoreEasy 1460/1560/1650/1660/1860 Disclaimer: This may not be a complete listing of applicable servers

NVIDIA Ampere 2-way 2-slot NVLink Bridge for HPE	
NVIDIA Ampere 2-way 2-slot Bridge	R6V66A
for HPE	

Supported Servers		
R6V66A	CPU *	
Supported Servers		
HPE ProLiant DL380a Gen11	SPR, EMR	See NVIDIA H100 NVL PCIe for details
HPE ProLiant DL385 Gen11	Genoa, Turin	See NVIDIA H100 NVL PCIe for details
HPE ProLiant XL675d Gen 10Plus	Rome	See NVIDIA H100 NVL PCIe for details
HPE ProLiant XL675d Gen 10Plus	Milan	See NVIDIA H100 NVL PCIe for details

NVIDIA A10 24GB non-CEC PCIe Accelerator	
NVIDIA A10 24GB PCIe Non-CEC Accelerator for HPE	R9W59C
Performance	31TF SP, 125TF FP16
Memory Size	24GB GDDR6
Memory Bandwidth	600 GB/s
System Interface	PCle Gen4
Power	150W
Form Factor	4.4" H x 10.5" L, Single Slot

Supported Servers	
R9W59C	CPU *
Supported Servers	
HPE DL345 Gen10 Plus	Milan
HPE ProLiant DL380 Gen10 Plus	Icelake
HPE SY480 Gen10 Plus E4	Icelake

NVIDIA A2 16GB PCIe Non-CEC Accelerator		
NVIDIA A2 16GB PCIe Non-CEC Accelerator for HPE	R9H23C	
Performance	FP32: 4.5TF, TF32: 9TF, BFLOAT 16:18TF, FP16: 18TF, INT8: 36 TOPS, INT4: 72 TOPS	
Memory Size	16 GB GDDR6	
Memory Bandwidth	200 GB/s	
Multi-instance GPUs	2.560	
System Interface	PCle Gen4 x 8	
Power	40-60W	
Form Factor	Single Slot, Low Profile, HHHL	

Supported Servers	
R9H23C	CPU *
Supported Servers	
HPE Alletra 4110 Storage Server	SPR, EMR
HPE Alletra 4120 Storage Server	SPR, EMR
HPE ProLiant DL325 Gen10 Plus v2	Milan
HPE ProLiant DL325 Gen11	Genoa, Turin
HPE ProLiant DL360 Gen10	Cascade
HPE ProLiant DL360 Gen10 Plus	Icelake
HPE ProLiant DL360 Gen11	SPR, EMR
HPE ProLiant DL380 Gen10	Cascade
HPE ProLiant DL380 Gen10 Plus	Icelake
HPE ProLiant DL385 Gen10 Plus v2	Milan
HPE Synergy 480 Gen10 Plus H	Icelake
HPE Synergy 480 Gen10 Plus P	Icelake
HPE Synergy 480 Gen10	Cascade
HPE Edgeline EL8000	Icelake
e920/e920d/e920t	
HPE Apollo 4200 Gen10 Plus	Icelake
HPE ProLiant ML350 Gen10	Cascade

NVIDIA A16 64GB non-CEC PCIe	Accelerator for HPE
NVIDIA A16 64GB PCIe Non-CEC Accelerator for HPE	R8T26C
Performance	FP32 TF32 TF321 (TFLOPS): 4x 4.5 4x 9 4x 18 FP16 FP161 (TFLOPS): 4x 17.9 4x 35.9 INT8 INT81 (TOPS): 4x 35.9 4x 71.8
Memory Size	64 GB GDDR-6 (16 GB/GPU)
Memory Bandwidth	4x 200 GB/s
System Interface	PCle Gen4 x16
Power	250W
Form Factor	10.5" Dual slot, Full Height, Full Length
Performance	FP32 TF32 TF321 (TFLOPS): 4x 4.5 4x 9 4x 18 FP16 FP161 (TFLOPS): 4x 17.9 4x 35.9 INT8 INT81 (TOPS): 4x 35.9 4x 71.8

Supported Servers	
R8T26C	CPU *
Supported Servers	
HPE ProLiant DL320 Gen11	SPR, EMR
HPE ProLiant DL380 Gen10	Cascade
HPE ProLiant DL380 Gen10 Plus	Icelake
HPE ProLiant DL380 Gen11	SPR, EMR
HPE ProLiant ML350 Gen11	SPR, EMR
HPE Synergy 480 Gen 10 Plus	Icelake
HPE ProLiant DL385 Gen10 Plus v2	Milan
HPE ProLiant DL365 Gen11	Genoa, Turin
HPE ProLiant DL385 Gen11	Genoa, Turin

Supported Servers	
R9S38C	CPU *
Supported Servers	
HPE Superdome Flex	Cascade
HPE Superdome Flex 280	Cooper
HPE ProLiant DL380 Gen10	Cascade
HPE ProLiant DL380 Gen11	SPR, EMR
HPE ProLiant DL380 Gen10 Plus	Icelake
HPE ProLiant DL385 Gen10 Plus v2	Milan

NVIDIA H100 NVL 94GB PCIe Accelerator for HPE with NVIDIA AI Enterprise License *		
NVIDIA H100 NVL 94GB PCIe Accelerator for HPE	S2D86C/ S2D86A	
Performance	30TF FP64, 60TF FP32, 1,671TF FP16, 3,341TF FP8	
Memory Size	94GB HBM3	
Memory Bandwidth	3.94TB/s	
Multi-instance GPUs	Up to 7MIGs @ 12GB	
System Interface	PCIe Gen5	
Power	400W	
Form Factor	10.5"x1.37"x4.37", Full Height, Full Length	

Notes: Includes a five-year **NVIDIA AI Enterprise** subscription. Activate your **NVIDIA AI Enterprise License** here.

Supported Servers	
S2D86C	CPU *
Supported Servers	
HPE EL8000 e930t Gen11	SPR
HPE Compute Scale-up Server 3200	SPR
HPE ProLiant DL380 Gen11	SPR, EMR
HPE ProLiant DL380 Gen12	SRF, GNR
HPE ProLiant DL380a Gen11	SPR, EMR
HPE ProLiant DL380a Gen12	SRF
HPE ProLiant DL385 Gen11	Genoa, Turin
HPE Superdome Flex 280	CPX
HPE Superdome Flex	CLX

Supported Servers	
S2D86A	CPU *
Supported Servers	
HPE XL675D Gen 10 Plus	Milan
HPE XL295v Gen11	Genoa

NVIDIA H200 NVL 141GB PCIe Accelerator for HPE with NVIDIA AI Enterprise License *	
NVIDIA H200 NVL 141GB PCIe Accelerator for HPE	S3U30C
Performance	34TF FP64, 67TF FP32, 1,979TF FP16, 3,958 TF FP8
Memory Size	141GB HBM3e
Memory Bandwidth	4.8TB/s
Multi-instance GPUs	Up to 7MIGs @ 18GB
System Interface	PCle Gen5
Power	600W
Form Factor	10.5"x1.37"x4.37", Full Height, Full Length

Notes: Includes a five-year **NVIDIA AI Enterprise** subscription. Activate your **NVIDIA AI Enterprise License** here.

Supported Servers	
S3U30C	CPU *
Supported Servers	
HPE ProLiant DL380a Gen12	SRF, GNR
HPE ProLiant Compute DL385 Gen11	Genoa, Turin

NVIDIA 2-way NVLink Bridge for H200 NVL		
NVIDIA 2-way NVLink Bridge for	S4A90C	
H200 NVL		
S4A90C	CPU *	
Supported Servers		
HPE ProLiant DL380a Gen12	SRF, GNR	See NVIDIA H200 NVL PCIe for details
HPE ProLiant Compute DL385 Gen11	Genoa,	See NVIDIA H200 NVL PCIe for details
	Turin	

NVIDIA 4-way NVLink Bridge for H200 NVL		
NVIDIA 4-way NVLink Bridge for H200 NVL	S4A91C	
S4A91C Supported Servers	CPU *	
HPE ProLiant DL380a Gen12	SRF, GNR	See NVIDIA H200 NVL PCIe for details

NVIDIA L4 24GB PCIe Accelerator for HPE	
NVIDIA L4 24GB PCIe Accelerator for HPE	SOK89C
Performance	30TF FP32, 242TF FP16, 485TF INT8 (with sparsity, specs are one-half lower without)
Memory Size	24GB GDDR6
Memory Bandwidth	300GB/s
System Interface	PCle Gen4 x16
Power	72W (40W minimum)
Form Factor	Half-height, Half-length, Single-slot

Supported Servers		
SOK89C	CPU *	
Supported Servers		
HPE Alletra 4110 Storage Server	SPR, EMR	
HPE Alletra 4120 Storage Server	SPR, EMR	
HPE Alletra 4140 Storage Server	SPR, EMR	
HPE Alletra 4210 Storage Server	SRF, GNR	
HPE Apollo 4200 Gen10 Plus	ICX	
HPE Compute Scale-up Server 3200	SPR	
HPE EL8000 e920, e920d, e920t Gen 10 Plus	ICX	
HPE EL8000 930t Gen11	SPR	
HPE ProLiant DL145 Gen11	Sienna	
HPE ProLiant DL320 Gen11	SPR, EMR	
HPE ProLiant DL320 Gen12	SRF, GNR	
HPE ProLiant DL340 Gen12	SRF, GNR	
HPE ProLiant DL360 Gen10 Plus	Icelake	
HPE ProLiant DL360 Gen11	SPR, EMR	
HPE ProLiant DL360 Gen12	SRF, GNR	
HPE ProLiant DL380 Gen10 Plus	Icelake	
HPE ProLiant DL380 Gen11	SPR, EMR	
HPE ProLiant DL380 Gen12	SRF, GNR	
HPE ProLiant DL380a Gen11	SPR, EMR	
HPE ProLiant DL145 Gen11	Sienna	
HPE ProLiant DL325 Gen11	Genoa, Turin	
HPE ProLiant DL345 Gen11	Genoa, Turin	
HPE ProLiant DL365 Gen11	Genoa, Turin	
HPE ProLiant DL385 Gen11	Genoa, Turin	
HPE ProLiant ML110 Gen11	SPR, EMR	
HPE ProLiant ML350 Gen11	SPR, EMR	
HPE ProLiant ML350 Gen12	GNR	
HPE Superdome Flex	Cascade	
HPE Superdome Flex 280	Cooper	

NVIDIA L40 48GB PCIe Accelerator for HPE	
NVIDIA L40 48GB PCIe Accelerator for HPE	SOK90C
Performance	90TF FP32, FP8 Tensor core TFLOPS 724 (with sparsity)
Memory Size	48GB GDDR6
Memory Bandwidth	864GB/s
System Interface	PCle Gen4 x16
Power	300W
Form Factor	4.4"H x 10.5"L dual-slot

Supported Servers	
S0K90C	CPU *
Supported Servers	
HPE ProLiant DL320 Gen11	SPR, EMR
HPE ProLiant DL380 Gen10 Plus	Icelake
HPE ProLiant DL380 Gen11	SPR, EMR
HPE ProLiant DL380a Gen11	SPR, EMR
HPE ProLiant DL385 Gen11	Genoa
HPE ProLiant DL560 Gen11	SPR
HPE ProLiant ML350 Gen11	SPR, EMR
HPE ProLiant XL675d Gen10 Plus	Milan
HPE Superdome 3200 Server	SPR
HPE Superdome Flex	Cascadee
HPE Superdome Flex 280	Cooper

NVIDIA RTX PRO 6000 Blackwell Server Edition 96GB PCIe Accelerator for HPE	
NVIDIA RTX PRO 6000 Blackwell	
Server Edition 96GB PCle Accelerator	
for HPE	
Performance	117TF FP32
Memory Size	96GB GDDR7
Memory Bandwidth	1.6TB/s
Multi-instance GPUs	Up to 4MIGs @ 24GB
System Interface	PCle Gen5 x16
Power	600W
Form Factor	4.4"H x 10.5"L dual-slot

Supported Servers	
Supported Servers	CPU *
HPE ProLiant DL380a Gen12	GNR
HPE ProLiant DL385 Gen11	Turin

NVIDIA L40S 48GB PCIe Accelerator for HPE			
NVIDIA L40S 48GB PCIe Accelerator for HPE	S2L70A/ S2L70C		
Performance	90TF FP32, FP8 Tensor core TFLOPS 1,466 (with sparsity)		
Memory Size	48GB GDDR6		
Memory Bandwidth	864GB/s		
System Interface	PCle Gen4 x16		
Power	350W		
Form Factor	4.4"H x 10.5"L dual-slot		

Supported Servers		
S2L70C	CPU *	
Supported Servers		
HPE EL8000t 930t Gen11	SPR	
HPE EL8000 e920d Gen 10 Plus	ICX	
HPE EL8000 xd295v Gen11	Genoa	
HPE Compute Scale up Server 3200	SPR	
HPE ProLiant DL320 Gen11	SPR, EMR	
HPE ProLiant DL320 Gen12	SRF, GNR	
HPE ProLiant DL380 Gen11	SPR, EMR	
HPE ProLiant DL380 Gen12	SRF, GNR	
HPE ProLiant DL380a Gen11	SPR, EMR	
HPE ProLiant DL380a Gen12	SRF	
HPE ProLiant DL145 Gen11	Sienna	
HPE ProLiant DL385 Gen11	Genoa, Turin	

Supported Servers	
S2L70A	CPU *
Supported Servers	
HPE Cray XD295v Gen11	Genoa
HPE ProLiant XI675d Gen10 Plus	Milan

NVIDIA RTX 4000 Ada Accelerator for HPE		
NVIDIA RTX 4000 Ada Graphics Accelerator for HPE	S3T54C	
Performance	26.7 TFLOPS single precision, 61.8 TFLOPS RT Core, 327.6 TFLOPS Tensor	
Memory Size	20GB GDDR6	
Memory Bandwidth	360GB/s	
System Interface	PCle Gen4 x16	
Power	130W	
Form Factor	4.4"H x 9.5"L single-slot	

Supported Servers		
S3T54C	CPU *	
Supported Servers		
HPE ProLiant ML30 Gen11	Intel Xeon E	
HPE ProLiant DL380 Gen11	SPR, EMR	
HPE ProLiant ML350 Gen11	SPR, EMR	
HPE ProLiant ML110 Gen11	SPR, EMR	

NVIDIA L20 48GB PCIe Accelerator for HPE (China, Hong Kong, Macau only) *			
NVIDIA L20 48GB PCIe GPU Accelerator for HPE	S4A92C		
Performance	59.8 TFLOPS FP32, 239 INT8/FP8 Tensor core TFLOPS (with sparsity)		
Memory Size	48GB GDDR6		
Memory Bandwidth	864GB/s		
System Interface	PCle Gen4 x16		
Power	275W		
Form Factor	4.4"H x 10.5"L dual-slot		

Supported Servers		
S4A92C	CPU **	
Supported Servers		
HPE ProLiant Compute DL320 Gen12	SRF, GNR	
HPE ProLiant Compute DL340 Gen12	SRF, GNR	
HPE ProLiant DL380a Gen11	SPR, EMR	
HPE ProLiant DL380a Gen12	SRF	
HPE ProLiant DL385 Gen11	Genoa, Turin	

Notes:

- NVIDIA L20 48GB PCIe Accelerator for HPE is only setup to be sold in China, Hong Kong and Macau
- **CPU Type
 - o Sky: 1st Gen Intel Xeon Scalable Processor
 - o Cascade: 2nd Gen Intel Xeon Scalable Processor
 - o Cooper: 3rd Gen Intel Xeon Scalable Processor
 - o Icelake: 3rd Gen Intel Xeon Scalable Processor
 - o SPR (Sapphire Rapids): 4th Gen Intel Xeon Scalable Processor
 - o EMR (Emerald Rapids) 5th Gen Intel Xeon Scalable Processor
 - o GNR (Granite Rapids) 6th generation Xeon Scalable server Processor
 - o SRF (Sierra Forest) 6th generation Xeon Scalable server Processor
 - o Coffee: 9th Gen Intel Core i3 Processor
 - o Broad: 5th Gen Intel Xeon D Processor
 - o EPYC: 1st Gen AMD EPYC Processor
 - o Rome: 2nd Gen AMD EPYC Processor
 - o Milan: 3rd Gen AMD EPYC Processor
 - o Genoa: 4th Gen AMD EPYC Processor
 - o Trento: AMD Processor

Service and Support

Service and Support

If this is a qualified option, it is covered under the HPE Support Service(s) applied to the HPE ProLiant Server. Please check HPE ProLiant Server documentation for more details on the services for this option.

Warranty and Support Services

Warranty and Support Services will extend to include HPE options configured with your server or storage device. The price of support service is not impacted by configuration details. HPE sourced options that are compatible with your product will be covered under your server support at the same level of coverage allowing you to upgrade freely. Installation for HPE options is available as needed. To keep support costs low for everyone, some high value options will require additional support. Additional support is only required on select high value workload accelerators, fibre switches, InfiniBand and UPS batteries over 12KVA.

HPE Services - Service and Support

Get the most from your HPE Products. Get the expertise you need at every step of your IT journey with **HPE Services Services**. We help you lower your risks and overall costs using automation and methodologies that have been tested and refined by HPE experts through thousands of deployments globally. HPE Services **Advisory Services**, focus on your business outcomes and goals, partnering with you to design your transformation and build a roadmap tuned to your unique challenges. Our **Operational Services** can be leveraged to speed up time-to-production, boost performance and accelerate your business. HPE Services specializes in flawless and on-time implementation, on-budget execution, and creative configurations that get the most out of software and hardware alike.

Consume IT on your terms

HPE GreenLake brings the cloud experience directly to your apps and data wherever they are—the edge, colocations, or your data center. It delivers cloud services for on-premises IT infrastructure specifically tailored to your most demanding workloads. With a pay-per-use, scalable, point-and-click self-service experience that is managed for you, HPE GreenLake accelerates digital transformation in a distributed, edge-to-cloud world.

- Get faster time to market
- Save on TCO, align costs to business
- Scale quickly, meet unpredictable demand
- Simplify IT operations across your data centers and clouds

Managed services to run your IT operations

HPE GreenLake Management Services provides services that monitor, operate, and optimize your infrastructure and applications, delivered consistently and globally to give you unified control and let you focus on innovation.

Recommended Services

HPE Tech Care Service.

HPE Tech Care Service is the new operational service experience for HPE products. Tech Care goes beyond traditional support by providing access to product specific experts, an Al driven digital experience, and general technical guidance to not only reduce risk but constantly search for ways to do things better. HPE Tech Care Service has been reimagined from the ground up to support a customer-centric, Al driven, and digitally enabled customer experience to move your business forward. HPE Tech Care Service is available in three response levels. Basic, which provides 9x5 business hour availability and a 2-hour response time. Essential which provides a 15-minute response time 24x7 for most enterprise level customers, and Critical which includes a 6-hour repair commitment where available and outage management response for severity 1 incidents.

https://www.hpe.com/services/techcare

Service and Support

HPE Complete Care Service

HPE Complete Care Service is a modular, edge-to-cloud IT environment service that provides a holistic approach to optimizing your entire IT environment and achieving agreed upon IT outcomes and business goals through a personalized and customer-centric experience. All delivered by an assigned team of HPE Services Services experts. HPE Complete Care Service provides:

- A complete coverage approach—edge to cloud
- An assigned HPE team
- Modular and fully personalized engagement
- Enhanced Incident Management experience with priority access
- Digitally enabled and AI driven customer experience

https://www.hpe.com/services/completecare

Protect your business beyond warranty with HPE Support Services

HPE Services provides a comprehensive portfolio including Advisory and Transformational, Professional, and Operational Services to help accelerate your digital transformation. From the onset of your transformation journey, Advisory and Transformational Services focus on designing the transformation and creating a solution roadmap. Professional Services specializes in creative configurations with flawless and on-time implementation, and on-budget execution. Finally, operational services provide innovative new approaches like Flexible Capacity and Complete Care, to keep your business at peak performance. HPE is ready to bring together all the pieces of the puzzle for you, with an eye on the future, and make the complex simple.

Parts and Materials

Hewlett Packard Enterprise will provide HPE-supported replacement parts and materials necessary to maintain the covered hardware product in operating condition, including parts and materials for available and recommended engineering improvements.

Parts and components that have reached their maximum supported lifetime and/or the maximum usage limitations as set forth in the manufacturer's operating manual, product QuickSpecs, or the technical product data sheet will not be provided, repaired, or replaced as part of these services.

The defective media retention service feature option applies only to Disk or eligible SSD/Flash Drives replaced by Hewlett Packard Enterprise due to malfunction.

HPE Support Center

The HPE Support Center is a personalized online support portal with access to information, tools and experts to support HPE business products. Submit support cases online, chat with HPE experts, access support resources or collaborate with peers.

Learn more: http://www.hpe.com/support/hpesc

The HPE's Support Center Mobile App* allows you to resolve issues yourself or quickly connect to an agent for live support. Now, you can get access to personalized IT support anywhere, anytime.

HPE Insight Remote Support and HPE Support Center are available at no additional cost with a HPE warranty, HPE Support Service or HPE contractual support agreement.

Notes: *HPE Support Center Mobile App is subject to local availability.

For more information

Visit the Hewlett Packard Enterprise Service and Support website.

Summary of Changes

Date	Version History	Action	Description of Change
16-Jun-2025	Version 72	Added	Added RTX Pro 6000 Blackwell Server Edition
			Added L20 saleable regions.
			Added H100 NVL, H200 NVL software license notes.
			Added sustaining quals.
		Removed	These obsolete SKUs H100 copy R9S41C/ R9S41A were removed from
			Standard Features section in page 5
02-Jun-2025	Version 71	Changed	Added L20 sustaining quals and L4 sustaining qual
			Standard Features section was updated.
			Obsolete SKU was removed.
10-Mar-2025	Version 70	Changed	Standard Features section was updated
18-Feb-2025	Version 69	Changed	Standard Features section was updated
03-Feb-2025	Version 68	Changed	Overview and Standard Features sections were updated
			Added sustaining SKUs.
02-Dec-2024	Version 67	Changed	Overview section was updated.
			Obsolete SKUs were removed.
			Added Turin quals and missing CSUS 3200 + L4, added H200 NVL
04-Nov-2024	Version 66	Changed	Standard Features section was updated.
			Obsolete SKUs were removed.
07-Oct-2024	Version 65	Changed	Overview and Standard Features sections were updated
03-Sep-2024	Version 64	Changed	Overview and Standard Features sections were updated
			Readded RTX 4000 Ada
05-Aug-2024	Version 63	Changed	Overview and Standard Features sections were updated
			Obsolete SKUs were removed
			Added RTX 4000 Ada and sustaining quals
01-Jul-2024	Version 62	Changed	Overview and Standard Features sections were updated Added RTX 4000
			Ada and sustaining quals
15-Apr-2024	Version 61	Changed	Overview and Standard Features sections were updated
04-Mar-2024	Version 60	Changed	Added sustaining quals and H100 NVL
			Overview and Standard Features sections were updated.
19-Feb-2024	Version 59	Changed	Updates and fixes
05-Feb-2024	Version 58	Changed	Removed Qualcomm Al100 PCle, Intel Data Center GPU Flex 140 and 170.
			Standard Features section was updated
08-Jan-2024	Version 57	Changed	Add Qualcomm Al100 PCle, Intel Data Center GPU Flex 140 and 170;
			Removed NVIDIA H100 NVL, added January sustaining quals
06-Nov-2023	Version 56	Changed	Added L40S. Overview and Standard Features sections were updated.
18-Sep-2023	Version 55	Changed	Added L40S. Overview and Standard Features sections were updated Added
10 1 1 0007			sustaining quals for Aug and September
10-Jul-2023	Version 54	Changed	Added links for supported OS and removed from tables
05-Jun-2023	Version 53	Changed	Added sustaining quals, adding missing NVLink bridge quals
			Standard Features section was updated.
03-Apr-2023	Version 52	Changed	Added L4 and L40, removed note on launched combos.
			Overview and Standard Features sections were updated.
06-Mar-2023	Version 51	Changed	Removed notes on launched combos. Added 2 A100, 2 H100, 1 A16.
0.5.			Standard Features section was updated.
06-Feb-2023	Version 50	Changed	Added H100
10-Jan-2023	Version 49	Changed	Added Gen11 quotable but not orderable systems
21-Nov-2022	Version 48	Changed	Added numerous ESXi qualifications, added back missing A30
01-Aug-2022	Version 47	Changed	Overview and Standard Features sections were updated.

Summary of Changes

Date	Version History	Action	Description of Change
05-Jul-2022	Version 46	Changed	Added A10 non-CEC, A30 non-CEC,
			Added A16 non-CEC, Updated DL385 Gen10 Plus with Milan processors to
			Gen10 Plus v2
20.1 2022	\\\\\\\.\\\\.\\\\\\\\\\\\\\\\\\	Clara and a	Overview and Standard Features sections were updated.
20-Jun-2022	Version 45	Changed	Added A2 non-CEC, sustaining A40 non-CEC and sustaining A100 80GB non-CEC
			Overview and Standard Features sections were updated
02-May-2022	Version 44	Changed	Overview and Standard Features sections were updated. Added compatibility.
02 1 ldy 2022	VCISIOII 44	changea	Added A100 80GB non CEC PCle and A40 48GB non-CEC Removed OBS
			V100/V100S PCIe SKUs. Removed A2 and A16.
11-Oct-2021	Version 43	Changed	Service and Support section was updated
07-Sep-2021	Version 42	Changed	Standard Features section was updated
			Obsolete SKUs were removed
02-Aug-2021	Version 41	Changed	Added NVIDIA A10 C-SKU
0 (1 1 0 0 0 1			Overview, Standard Features and Service and Support sections were updated.
06-Jul-2021	Version 40	Changed	Overview and Standard Features sections were updated.
07-Jun-2021	Version 39	Changed	Standard Features section was updated
04-May-2021	Version 38	Changed	Standard Features section was updated.
12-Apr-2021	Version 37	Changed	Overview and Standard Features sections were updated.
06-Apr-2021 01-Feb-2021	Version 36	Changed	Overview and Standard Features sections were updated.
01-Feb-2021	Version 35	Changed	Overview and Standard Features sections were updated. Added A100 HGX Products
07-Dec-2020	Version 34	Changed	Add NVLink Bridge and A100 HGX products
05-Oct-2020	Version 33	Changed	Changed Naming, Added A100 New Product and Updated server language
05 001 2020	Version 55	Charigea	to be inclusive of Pan-HPE support
06-Apr-2020	Version 32	Changed	Overview and Standard Features sections were updated
			Obsolete SKUs were removed
02-Dec-2019	Version 31	Changed	Overview and Standard Features sections were updated
07 1 2010		Classissis	Obsolete SKUs were removed
03-Jun-2019	Version 30	Changed	Models and Standard Features sections were updated Overview and Standard Features sections were updated.
02-Apr-2019	Version 29	Changed	Obsolete SKUs were removed.
04-Feb-2019	Version 28	Changed	Overview and Standard Features sections were updated
03-Dec-2018	Version 27	Changed	Standard Features section was updated
15-Oct-2018	Version 26	Changed	Overview and Standard Features sections were updated.
01-Oct-2018	Version 25	Changed	Overview, Additional Options and Service and Support sections were updated.
			Added GV100 Bridge Kit; corrected wrong PNs
04-Jun-2018	Version 24	Changed	Changes made throughout document; adding V100 FHHL card
07-May-2018	Version 23	Changed	Add HPE NVIDIA Tesla V100 PCIE 32GB Computational Accelerator / HPE
			NVIDIA Tesla V100 SXM2 32GB Computational Accelerator.
02-Apr-2018	Version 22	Changed	Updates throughout document; added GV100
04-Dec-2017	Version 21	Changed	New modules added
16-Oct-2017	Version 20	Changed	Update verbiage in the Standard
25-Sep-2017	Version 19	Changed	Update verbiage in the Standard Features Sections
11-Jul-2017	Version 18	Changed	New models were added and updates throughout the whole document
05-Jun-2017	Version 17	Changed	Remove obsolete info and SKUs and update the recent info
08-May-2017	Version 16	Changed	New models were added and updates throughout the whole document
28-Nov-2016	Version 15	Changed	Updates throughout the whole document
26-Sep-2016	Version 14	Changed	Added new SKUs to QS
06-Jun -2016	Version 13	Changed	Add The new information to the QS and remove obsolete SKU's
31-Mar-2016	Version 12	Changed	Update all the sections and general info throughout the QuickSpecs

Summary of Changes

Date	Version History	Action	Description of Change
01-Dec-2015	Version 11	Changed	Update the Standard Features and the technical Specifications section
17-Aug-2015	Version 10	Changed	Update several Overview and technical specifications.
09-Feb-2015	Version 9	Changed	Update several Overview and technical specifications.
01-Dec-2014	Version 8	Changed	Revised wording and Technical Specifications
09-Sep-2014	Version 7	Changed	Changes made throughout the QuickSpecs.
05-Jun-2014	Version 6	Changed	High Performance Clusters and Thermal Solutions were revised
31-Mar-2014	Version 5	Changed	NVIDIA Tesla K40C 12 GB Computational Accelerator and NVIDIA Quadro
			K2000 PCIe Graphics Adapter were added
18-Feb-2014	Version 4	Changed	Changes made throughout the QuickSpecs
09-Dec-2013	Version 3	Changed	NVIDIA Tesla K10 Rev B Dual GPU Module and NVIDIA Tesla K40 12 GB
			Module were added.
20-Sep-2013	Version 2	Changed	Changes made in the following Sections
·			Standard Features
			Optional Features
			Technical Specifications
10-Sep-2013	Version 1	New	New QuickSpecs

NVIDIA Accelerators for HPE

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